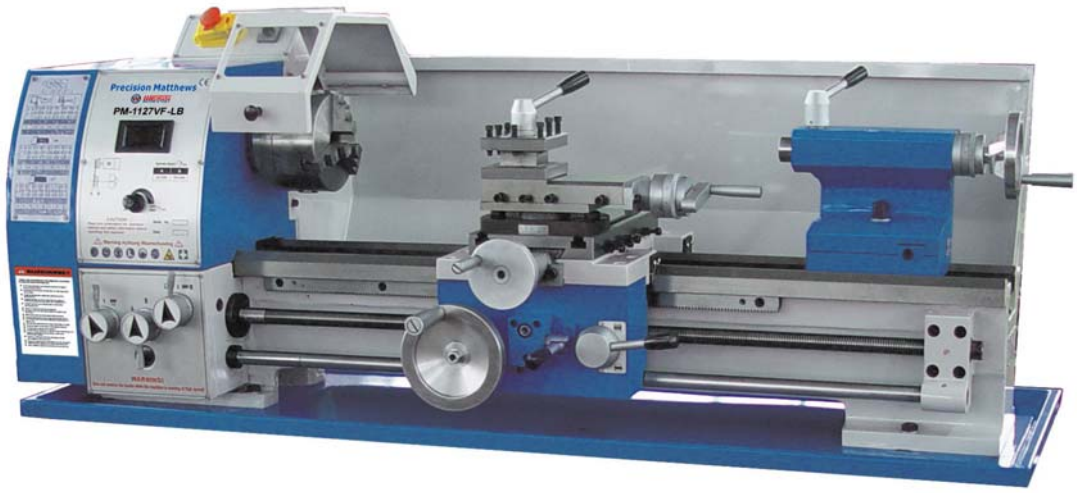
Precision Matthews

WEISS MACHINE & TOOLS

PM-1127VF-LB

OPERATOR'S MANUAL



Keep Read and Understand the Operation Manual and Safety Information Before Operated!

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GENERAL SAFETY INSTRUCTIONS FOR MACHINES

Extreme caution should be used when operating all power tools. Know your power tool, be familiar with its operation, read through the user manual and practice safe usage procedures at all times.

- **ALWAYS** read and understand the user manual before operating the machine.
- **CONNECT** your machine ONLY to the matched and specific power source.
- **ALWAYS** wear safety glasses respirators, hearing protection and safety shoes, when operating your machine.
- **DO NOT** wear loose clothing or jewelry when operating your machine.
- **A SAFE ENVIRONMENT** is important. Keep the area free of dust, dirt and other debris in the immediate vicinity of your machine.
- **BE ALERT! DO NOT** use prescription or other drugs that may affect your ability or judgment to safely operate your machine.
- **DISCONNECT** the power source when changing drill bits, hollow chisels, router bits, shaper heads, blades, knives, or making other adjustments or repairs.
- **NEVER** leave a tool unattended while it is in operation.
- **NEVER** reach over the machine when the tool is in operation.
- **ALWAYS** keep blades, knives and bits sharpened and properly aligned.
- **ALL OPERATIONS MUST BE** performed with the guards in place to ensure safety.
- **ALWAYS** use push sticks and feather boards to safely feed your work through the machine and clamp the work-piece (when necessary) to prevent the work-piece from any unexpected movement.
- **ALWAYS** make sure that any tools used for adjustments are removed before operating the machine.
- **ALWAYS** keep the bystanders safely away while the machine is in operation.
- **NEVER** attempt to remove jammed cutoff pieces until the saw blade has come to a full stop.

PM-1127VF-LB - METAL LATHE
SPECIFIC SAFETY INSTRUCTIONS

- **This machine is designed and intended for use by properly trained and experienced personnel only.** If you are not familiar with the proper use of lathes, do not use this machine until proper training and knowledge has been obtained.
- **Keep guards in place.** Safety guards must be kept in place and in working order all the times to ensure safety.
- **Keep children and visitors away.** All children and visitors should be kept at a safe distance from the work area.
- **Wear proper apparel.** Loose clothing, gloves, neckties, rings, bracelets, or other jewelry may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Do not wear any type of gloves.
- **Always use safety glasses.** For the safety of your eyes, safety glasses should be used while operating the lathe.
- **Do not use the lathe in dangerous environments.** Do no expose the machine to rain. Do not use the machine in wet locations.
- **Check for damaged parts.** Check for proper alignment of moving parts, broken parts, and any other conditions that may effect the tools operation.
- **Remove adjusting keys and wrenches.** Remove all the tools used for adjustment before turning the machine on.
- **Be careful.** Do not put your hand close to the cutter while the machine is running.
- **Never leave the lathe** unattended while it is running.
- **Do not over-reach.** Keep proper footing and balance at all times.
- **Maintain tools with care.** Keep tools sharp and clean for best and safest performance. Follow instructions given in the manual for lubrication and replacing accessories.
- **Turn the power OFF.** Before making any adjustments, make sure the switch is in the “OFF” position and the cord is un-plugged from the power outlet.
- **Make sure** you have read and understood all the safety instructions in the manual and you are familiar with your metal lathe, before operating it. If you fail to do so, serious injury could occur.

WARNING

***The safety instructions given above can not be complete because the environment in every shop is different. Always consider safety first as it applies to your individual working conditions*.**

Precision Matthews

WEISS MACHINE & TOOLS

PM-1127VF-LB – METAL LATHE

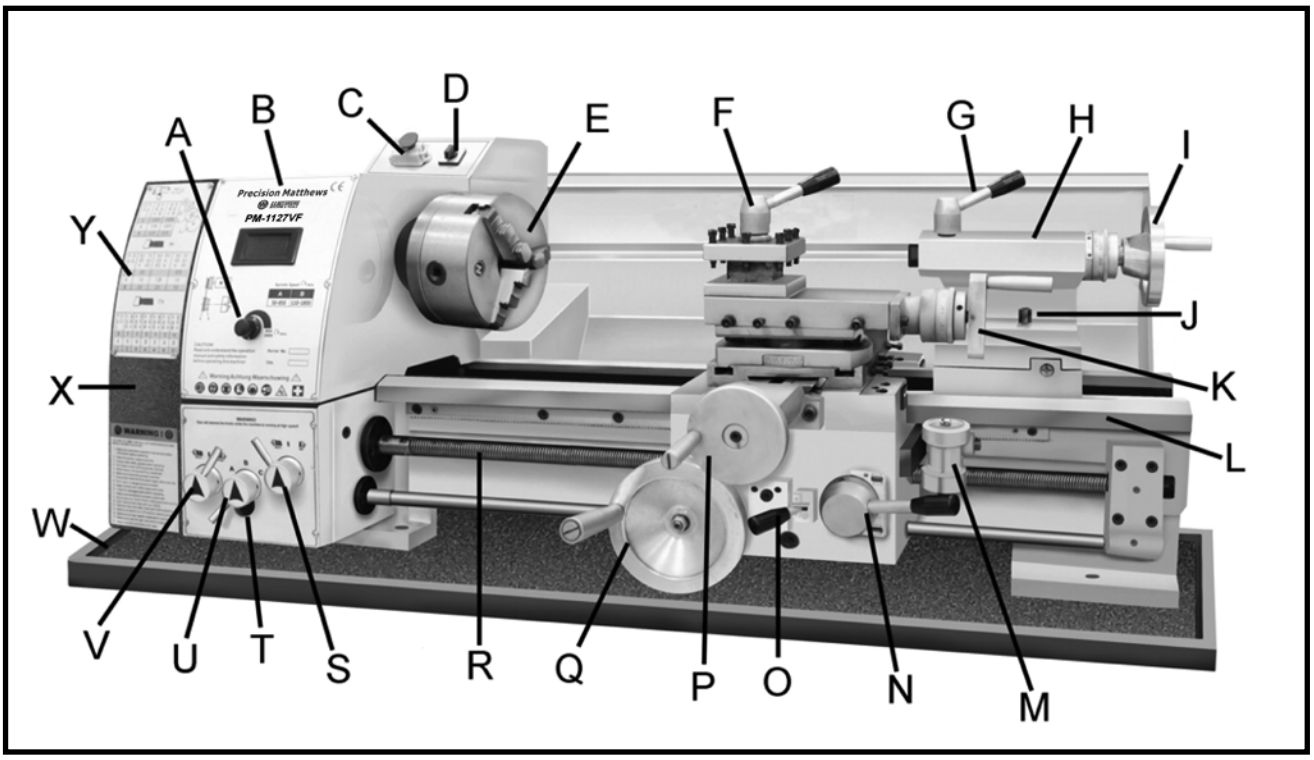
FEATURES

MODEL PM-1127VF-LB – 12" x 28" METAL LATHE WITH VARIABLE SPEED

As part of the growing line of WEISS metalworking equipment, we are proud to offer the PM-1127VF-LB a 12" x 28" Metal Lathe with Digital Readout. By following the instructions and procedures laid out in this user manual, you will receive years of excellent service and satisfaction. The PM-1127VF-LB is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- Motor.....1.5-HP, 1.1 KW, DC90 V, 12.3 Amp, 4600 r/min
- Swing Over Bed.....11.5", (290mm)
- Swing Over Cross Slide.....6.5", (165mm)
- Distance Between Centers.....27.5", (700mm)
- Width of Bed.....7", (180mm)
- Hole Through Spindle.....1", (26mm)
- Taper in Spindle Nose.....MT5
- Number of Spindle Speeds.....Variable
- Range of Spindle Speeds.....50 – 850 RPM and 110 – 1800 RPM (Variable Speed)
- Number of Metric Threads.....18
- Range of Metric Threads.....0.2mm – 3.5mm
- Number of Imperial Threads.....21
- Range of Imperial Threads.....8 – 56 T.P.I
- Range of Cross Feed.....0.02 – 0.28mm / Revolution
- Range of Longitudinal Feed.....0.07 – 0.40mm / Revolution
- Tool Post Type.....4-Way
- Max Compound Slide Travel.....3", (80mm)
- Max Cross Slide Travel.....5.5", (140mm)
- Maximum Carriage Travel.....22", (560mm)
- Tailstock Spindle Travel.....3", (80mm)
- Taper in Tailstock Spindle.....MT3
- Overall Dimension of the lathe.....Length 55" x Width 27.5" x Height 26.5"
- Weight.....210 Kgs (462 lbs)
- Warranty.....3-Years

PM-1127VF-LB - METAL LATHE
PHYSICAL FEATURES



A. Variable Speed Switch
B. Headstock
C. ON/OFF Switch
D. Forward/Reverse Switch
E. 3-Jaw Chuck
F. Four Way Tool Post
G. Tail Stock Quill Lock Lever
H. Tail Stock
I. Tail Stock Hand Wheel
J. Tail Stock Lock Nut
K. Compound Slide Traverse Lever
L. Lathe Bed
M. Thread Dial Indicator
N. Half Nut Lever
O. Auto Feed Lever
P. Cross Slide Hand Wheel
Q. Carriage Hand Wheel
R. Lead Screw
S. Feed/Thread Selector Knob
T. Oil Sight Glass
U. Feed Rate Selector Knob
V. Feed Direction Selector Knob
W. Chip Tray
X. Change Gear Protective Cover
Y. Threading/Feeding Table

SETUP

Before setting up your machine you must read and understand the instructions given in this manual.

The unpainted surfaces of this lathe are coated with a rust preventive waxy oil and you will want to remove this before starting assembly. Use a solvent cleaner that will not damage painted surfaces.

> ***WARNING***
>
> *PM-1127VF-LB is a very heavy machine, do not over-exert yourself. Use fork truck or other mechanical devices for safe moving method*

When setting up your machine, you will want to find an ideal spot where your metal lathe will most likely be positioned most of the time.

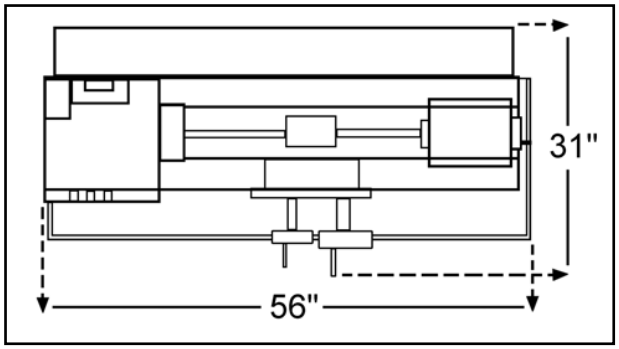


Figure-1 PM-1127VF-LB Foot print

UNPACKING

To ensure safe transportation this machine is properly packaged and shipped completely in crates. When unpacking, carefully inspect the crates and ensure that nothing has been damaged during transit. Open the crates and check that the machine and the parts are in good condition.

LIST OF CONTENTS **QTY**

A. Face Plate 1
B. Change Gears 9
C. 4-Jaw Chuck 1
D. 3-Jaw Chuck 1
E. Steady Rest 1
F. Follow Rest 1
G. External Jaws for 3-Jaw Chuck 3
H. Dead Center MT3 1
I. Reduce Sleeve (No. 5/3) 1
J. Oil Gun 1
K. Toolbox 1
L. 4-Way Tool Post 1
M. Wrenches (8-10, 12-14, 17-19) 3
N. Hex Wrenches (3,4,5,6,8) 5
O. Chuck Keys 3
P. Screw Drivers (Flat & Cross Head) .. 2
Q. Lathe with Chip Tray (Not Shown) ... 1

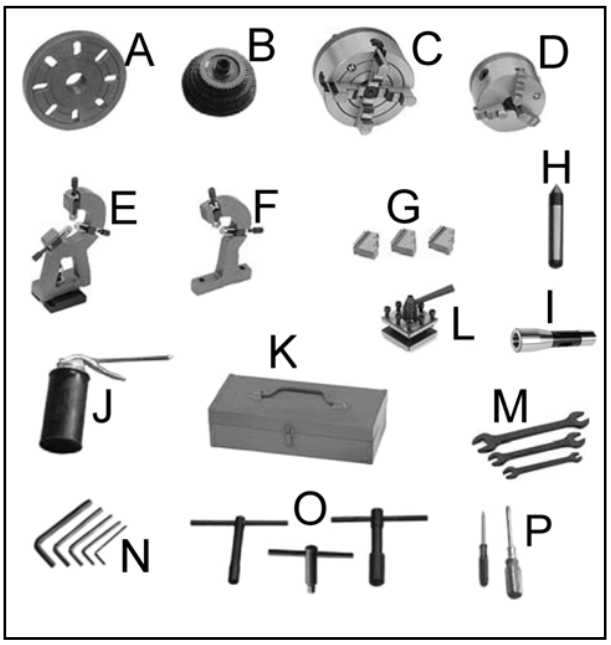


Figure-2 Inventory

While doing inventory, if you can not find any part, check if the part is already installed on the machine. Some of the parts come assembled with the machine because of shipping purposes.

PROPER GROUNDING

Grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

PM-1127VF-LB is equipped with a 110-V single phase motor.

To prevent electrical hazards, have a qualified electrician ensure that the line is properly wired.

This lathe is for use on a normal 110 volt circuit. Make sure that the appliance is connected to an outlet having the same configuration as the plug. If an adaptor plug is used, it must be attached to the metal screw of the receptacle.

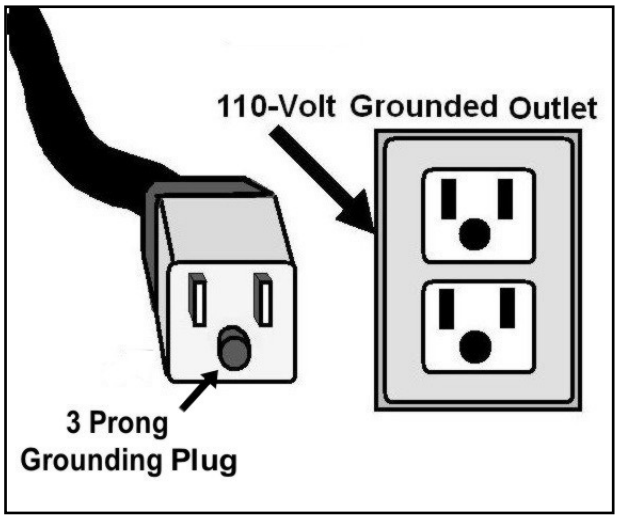


Figure-3 110-Volts Outlet for PM-1127VF-LB

WARNING

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.

It is strongly recommended not to use extension cords with your PM-1127VF-LB. Always try to position your machine close to the power source so that you do not need touse extension cords.

When it is necessary to use an extension cord, make sure the extension cord does not exceed 50-feet in length and the cord is 12-gauge to prevent motor damage.

Your PM-1127VF-LB should be wired with a plug having 3-prongs to fit a 3 prong grounded receptacle as shown in figure-3.

Do not remove the grounding prong to fit it into a 2-pronged outlet. Always check with a qualified electrician if you are in doubt.

CHUCK

PM-1127VF-LB comes equiped with a 125mm, 3-jaw chuck, a 125mm, 4-jaw chuck and a 220mm faceplate.

The 3-jaw chuck is a scroll type chuck, meaning that all three jaws move in union when adjusted while the 4-jaw chuck features four independent jaws. The 4-jaw chuck is used to clamp square or unevenly-shaped work-pieces.

The chucks feature three hex nut and three set screws for mounting as shown in figure-4.

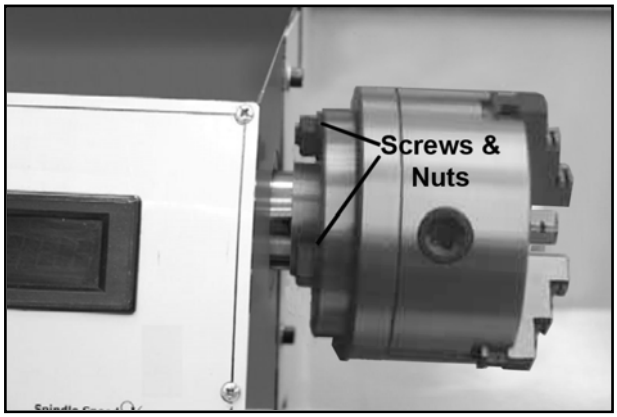


Figure-4 Chuck mounting screws and nuts

When removing the chuck, loosen the hex nuts, turn the washer counter-clockwise and pull out the chuck. See figure-4.

STEADY REST

The steady rest supports long, small diameter stock that otherwise could not be turned. The steady rest can also replace the tailstock to allow for cutting tool acces at the outboard end of your work-piece.

To mount the steady rest:

Secure the steady rest to the lathe bed from below with a locking plate.

A single cap screw, along with a nut and washer hold the steady rest in place as shown in figure-5.

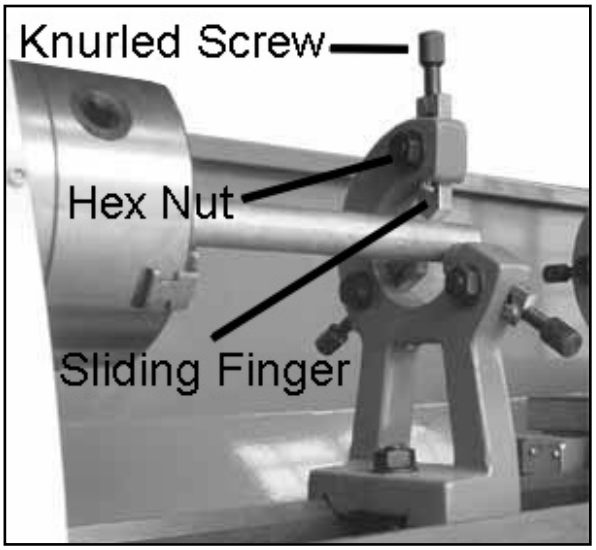


Figure-5 Steady rest

TO SET-UP THE STEADY REST:

Make sure the switch is in the OFF position and the cord is disconnected from the power source.

Loosen the hex nuts shown in figure-5.

Loosen knurled screw and open the sliding fingers until the steady rest can be moved with its finger around the work-piece. Secure the steady rest in position. See figure-5.

Tighten the knurled screw so that the fingers are snug but not tight against the work-piece. Tighten three hex nuts shown in figure-5 and lubricate the sliding points with machine oil.

The sliding fingers of the steady rest shown in figure-5 should receive periodic lubrication when used, to prevent premature wear.

FOLLOW REST

The follow rest is mounted on the saddle with two cap screws shown in figure-6 and it follows the movement of the turning tool. Only two sliding fingers are required. The place of the third finger is taken by turning tool. The follow rest is used for turning operations on long slender work-pieces. It prevents flexing of the work-piece under pressure from the turning tool.

Set the fingers snug to the work-piece and make sure not to over tighten. Lubricate the fingers during operation to prevent premature wear.

Figure-6 Follow rest installed

LATHE BED

The lathe bed is made of high quality iron and features high cheeks with strong cross ribs ensuring low vibration and rigidity. It integrates the headstock and drive unit, for attaching the carriage and leads crews. The two precision ground V-sideways are re-enforced by heat hardening and grinding to guide the carriage and the tailstock accurately. The main motor is mounted to the rear of the left side of the bed.

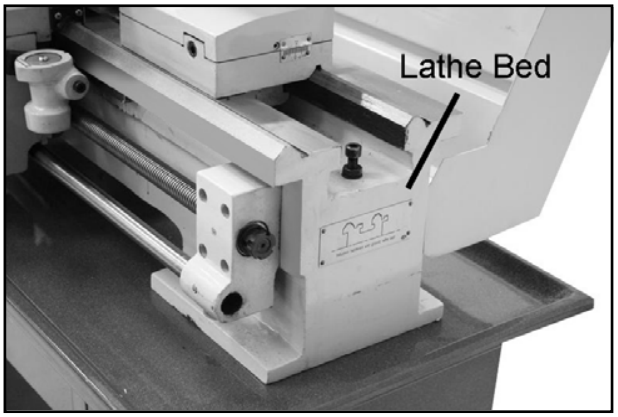


Figure-7 Lathe bed

HEADSTOCK

Made from high quality, cast iron for low vibration, the headstock is bolted to the bed with four screws. The headstock houses the main spindle with two precision taper roller bearings and the drive unit.

The main spindle transmits the torque during the turning process and it also holds the work-piece and clamping devices.

Figure-8 Headstock

GEARBOX

The gearbox is located on the left side of the lathe and is mounted on the bed. It is used to select the feeds for straight turning as well as for thread cutting. In order to achieve certain thread pitches, it is necessary to replace the change gears.

The torque of the work spindle is transmitted to the feed gears and thus to the lead screw.

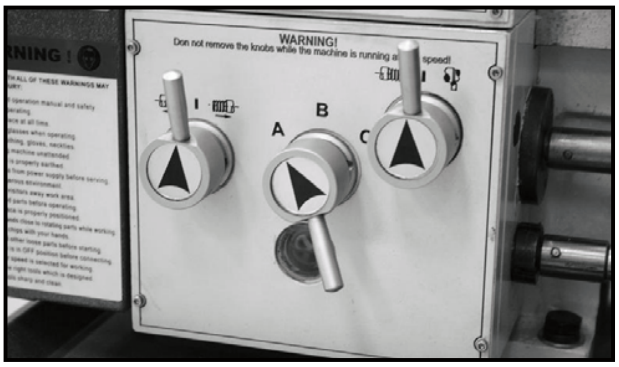


Figure-9 Gearbox

HEAD STOCK CONTROLS

EMERGENCY ON/OFF BUTTON: The On/Off button allows to start and stop the machine.

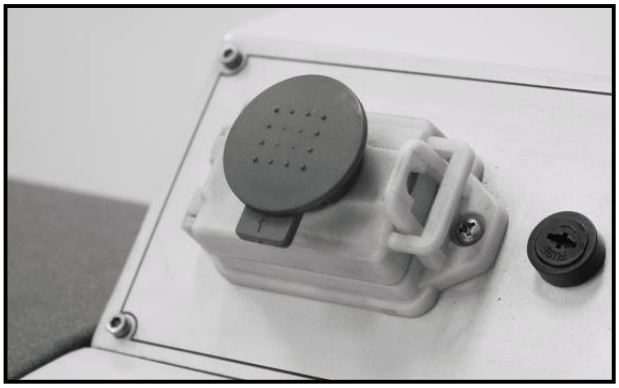


Figure-10 Emergency ON/OFF button

FORWARD / REVERSE SWITCH: After the machine is switched ON, turn the switch to "F" position for counter-clockwise spindle rotation (forward).

Turn the switch to "R" position for clockwise spindle rotation (Reverse).

Turning the switch to "0" position the spindle remains idle.

Figure-11 Forward / Reverse switch

FEED RATE SELECTOR KNOB: Use the feed rate selector knob to set the desired feed or thread rates. See figure-12.

FEED THREAD SELECTOR KNOB: For thread selecting, shift the knob to the left and for feed selecting, shift the knob to the right. See figure-12.

FEED DIRECTION SELECTOR KNOB: Select the carriage travel direction when the chuck is rotating in the forward direction or counter-clockwise as viewed from the front of the chuck.

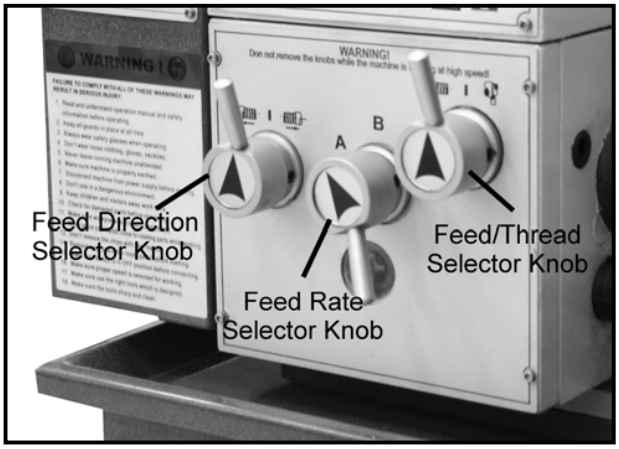


Figure-12 Gearbox controls

VARIABLE SPEED CONTROL KNOB: Turn the knob clockwise to increase the spindle speed and counter-clockwise to decrease the spindle speed. The possible speed range is dependent on the position of the drive belt. See figure-13.

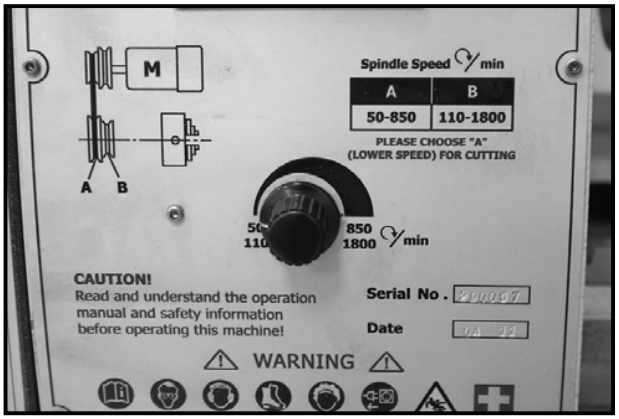


Figure-13 Variable speed control knob

APRON

The apron is mounted to the saddle and to the front side of the bed and it houses the half nut with an engaging lever for activating the automatic feed. The half nut gibs can be adjusted from the outside.

SADDLE

The saddle is made from high quality cast iron and all sliding parts are smoothly ground to fit the V on the bed without play.

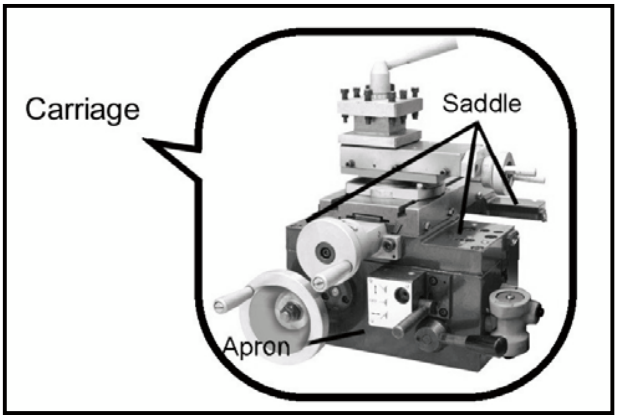


Figure-14 Saddle and apron

CARRIAGE CONTROLS

The carriage allows the cutting tool to move along the length of the lathe bed .The cross slide allows the cutting tool to travel perpendicular to the bed. The carriage features a top slide which allows linear movement of the cutting tool at any preset angle .This section will review the individual controls on the carriage and provide descriptions of their uses.

LONGITUDINAL TRAVEL HAND WHEEL: Turning the longitudinal hand wheel, moves the carriage left or right along the bed .The control is helpful when setting up the machine for turning, when manual movement is desired during turning operations. See figure-15.

CROSS SLIDE HAND WHEEL: Turning the cross slide hand wheel, moves the cross slide towards or away from the work-piece. The graduated scale can be adjusted

using the same method as the longitudinal scale. See figure-15.

TOP SLIDE HAND WHEEL: The top slide hand wheel controls the position of the cutting tool relative to the work-piece .The top slide is adjustable for angle as well as longitudinal travel. It can be adjusted a full 360°, if needed. See figure-15.

TOOL POST: A four-way tool post is supplied with PM-1127VF-LB. Cutting tools can be attached and removed by tightening or loosening the clamping bolt. See figure-15.

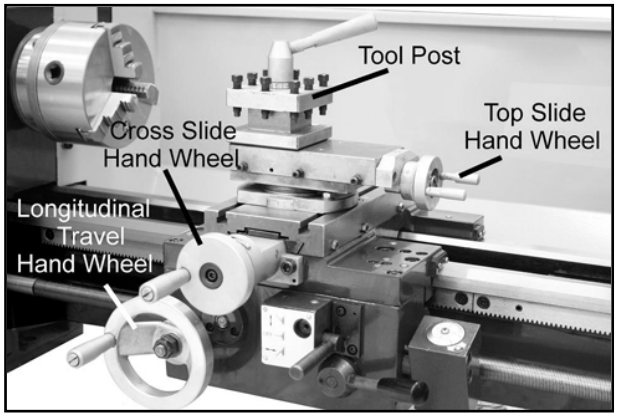


Figure-15 Carriage controls

AUTO FEED SELECTOR LEVER: Moving this lever upward engages the automatic longitudinal feed. Moving this lever down engages the automatic traverse feed. See figure-16.

WARNING

Do not simultaneously engage the feed lever and the threading lever. Doing so will damage the lathe.

HALF NUT LEVER: This lever engages and disengages the half nut on the lead screw. The lever is only engaged while turning threads in stock. A lockout device feature in the lever mechanism engages when the feed selector is used.

THREADING DIAL INDICATOR: This indicator tells you when to engage the half nut for threading process. See figure-16.

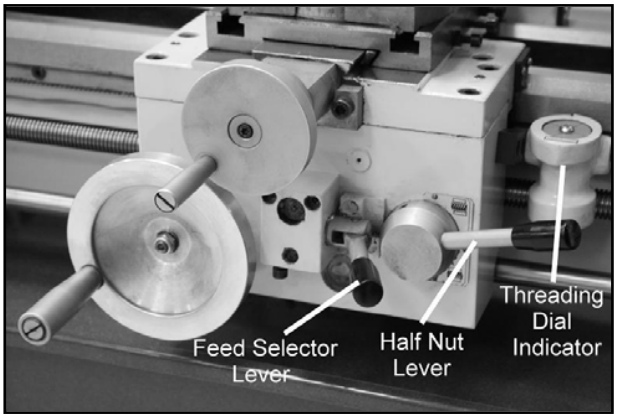


Figure-16 Carriage controls

LEAD SCREW AND FEED SCREW

The lead screw and feed screw are mounted on the front of the machine bed. It is connected to the gear box at the left for automatic feed and is supported by bearing on both ends.

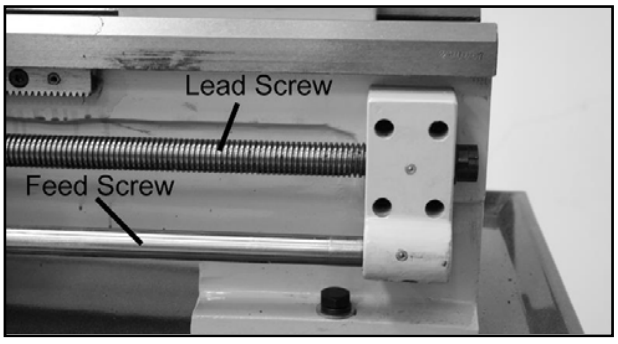


Figure-17 Lead screw and feed screw

TAILSTOCK

The tailstock slides on a V-way and can be clamped at any location. The tailstock has a heavy duty spindle and the spindle can be clamped at any location with a clamping lever. The spindle is moved with a hand wheel at the end of the tailstock.

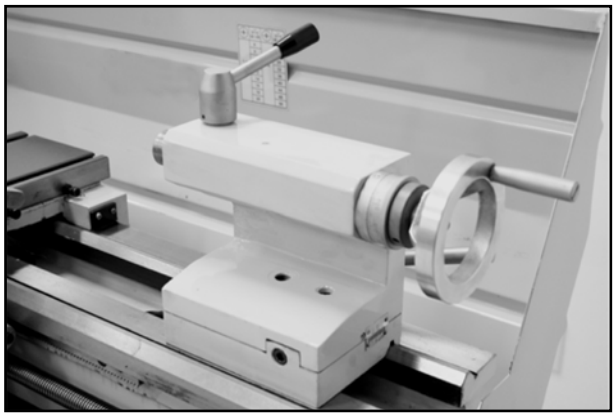


Figure-18 Tailstock

Make sure to install the securing screw at the end of the lathe as shown in figure-19 in order to prevent the tailstock from falling off the lathe bed.

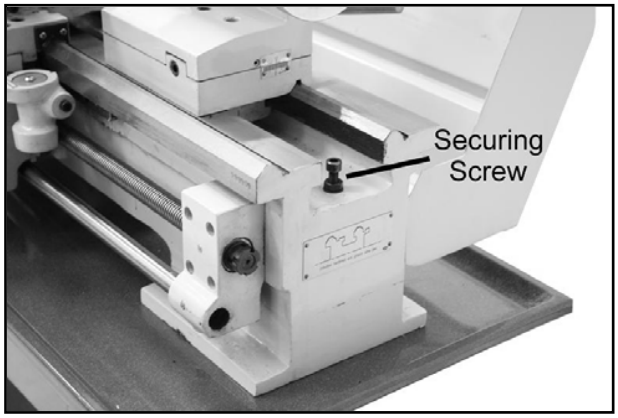


Figure-19 Installing the securing screw on the lathe bed

TAILSTOCK CONTROLS

TAILSTOCK HAND WHEEL: Turning the hand wheel advances or retracts the quill in the tailstock. The graduated scale on the hand wheel is adjustable. See figure-20.

QUILL LOCK LEVER: This lock lever locks the quill in position when tightened. See figure-20.

TAILSTOCK LOCK LEVER: Turn this lock lever up to lock and down to unlock the tailstock in position on the lathe bed. See figure-20.

ADJUSTMENT SCREW: This set screw is used to align the tailstock with the headstock. See page-20 for details on Center Alignment.

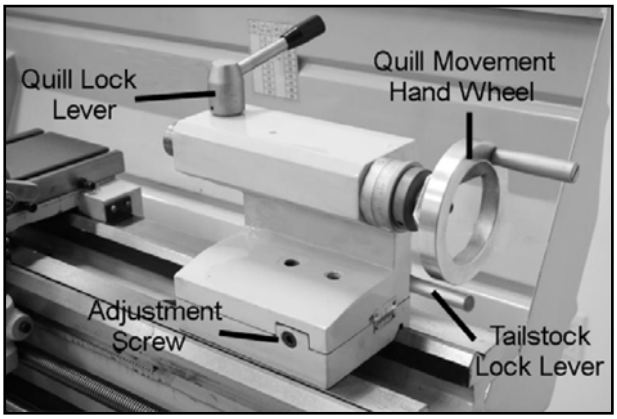


Figure-20 Tailstock controls

TEST RUN

Once you have assembled your lathe completely, it is then time for a test run to make sure that the lathe works properly and is ready for operation.

Remove all the tools used for assembling the machine and make sure all the guards are in place.

WARNING

Before starting the lathe, make sure that you have read and understood the manual and you are familiar with the functions and safety features on this machine. Failure to do so may cause serious personal injury.

To ensure the carriage controls do not move unexpectedly when the lathe is started, rotate the feed direction selector knob so that the arrow is pointing to the middle (neutral) position as shown in figure-21.

Figure-21 Feed direction selector knob

Connect the cord to the power outlet and turn the machine ON.

While test running the machine, check the following:

The Emergency Stop & ON/OFF buttons are working properly.

The chuck and jaws are properly secured and working properly.

While the machine is running, turn the variable speed control knob clockwise to make sure it is working properly.

Let the machine run for 10 minutes at the Low Speed.

During the test run if there is any unusual noise coming from the lathe or it vibrates excessively, turn OFF the power switch immediately and disconnect from the power source Investigate if you can find out the problem with your machine. See page-28 for troubleshooting.

If the machine is running smoothly, proceed to the next step.

Change the belt for High Speed and let the machine run for another 10 minutes. See page-16 for details on speed change.

Turn the machine OFF and turn the Forward/Reverse switch to “R” position. Turn the machine back ON and make sure the spindle is rotating clockwise (reverse).

WARNING

Do not make any adjustments while the machine is running. Failure to follow this warning can cause serious personal injuries to the operator and damage to the machine.

SPEED CHANGE

The rotating speed of the headstock is controlled by the positioning of the belts on the pulleys. These are accessed by removing the protective cover on the end of the headstock.

Refer to the Threading & Feeding Table for Lathe on page-27 or the plate on the headstock to determine which belt combinations produce what speeds. The speed settings available on the PM-1127VF-LB are 50 – 850 RPM and 110 - 1800 RPM.

TO CHANGE THE SPINDLE SPEED:

Unscrew the two fastening knobs shown in figure-22 and remove the protective cover.

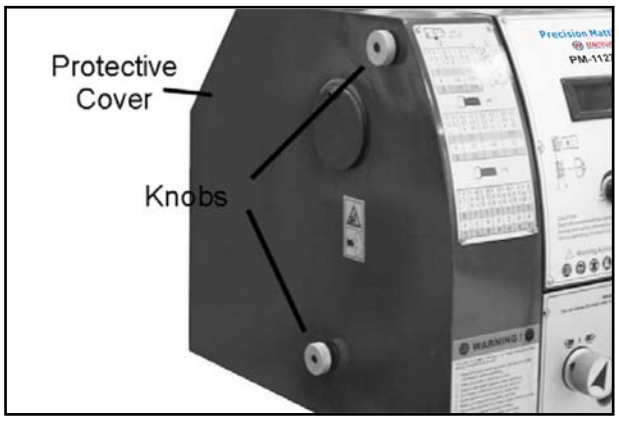


Figure-22 Removing the cover

Loosen the four nuts and screws shown in figure-23 and move the motor mounting pulley to release the tension on the belt.

Once the belt tension is released, reposition the belt on the pulleys grooves for high or low spindle speed.

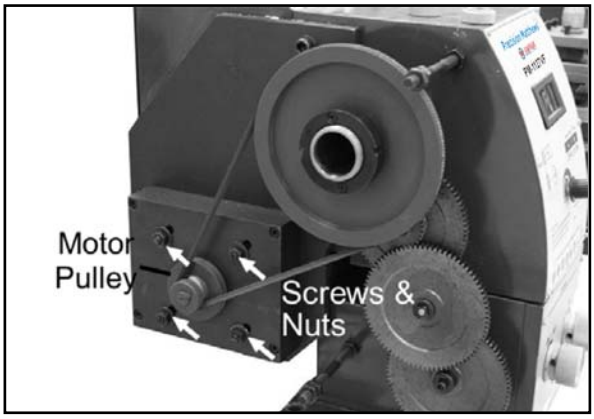


Figure-23 Screws and nuts securing the motor mounting plate

Position the belt on the pulleys for high and low speed according to figure-24.

The low spindle speed is 50 – 850 RPM while the high spindle speed is 110 - 1800 RPM.

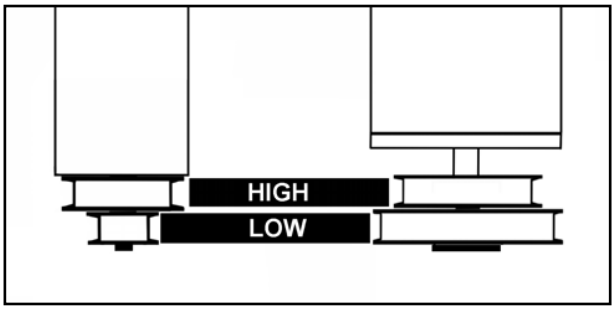


Figure-24 Belt position on the pulleys

Once the belt is on the right grooves, move the motor pulley back to its position to tension the belt. Re-tighten the screws and nuts removed.

IMPORTANT

We suggest selecting the low speed. It provides stronger torque while operation.

LONGITUDINAL TURNING WITH AUTO-FEED

Set the feed direction selector knob and feed rate selector knob shown in figure-25 to select the feed direction and feed speed.

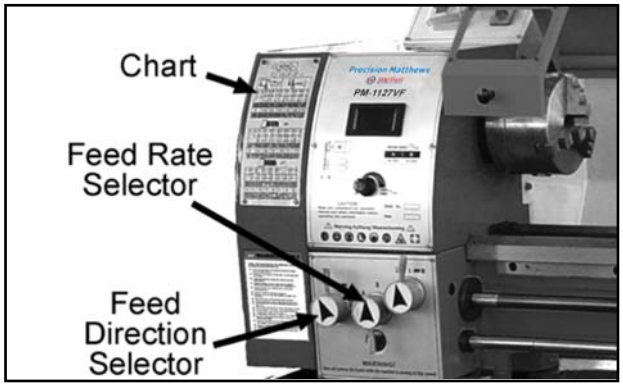


Figure-25 Feed rate selector knob, feed direction selector knob and chart

Use the chart on the lath for selecting the feed speed or the thread pitch. Select the proper gear set if the required feed or thread pitch can not be obtained with the installed gear set. Automatic feed is accomplished by moving the auto feed lever up. See figure-26.

Figure-26 Auto feed selector lever

MANUAL LONGITUDINAL TURNING

In this turning operation, the tool feeds parallel to the axis of rotation (longitudinal) of the work-piece. Manual feed is accomplished by turning the carriage hand wheel on the lathe apron or the top slide. The cross feed for the depth of cut is achieved using the cross slide. See figure-27.

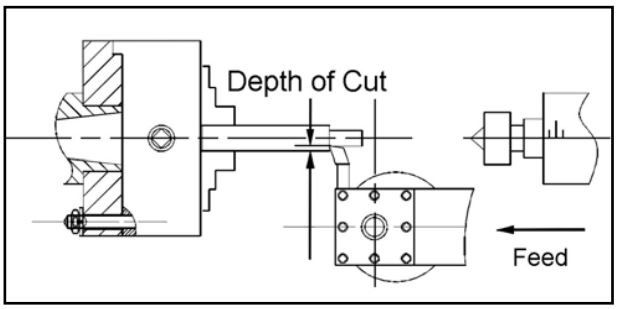


Figure-27 Straight turning

FACING AND RECESSES

In the facing operation, the tool feeds perpendicular to the axis of rotation of the work-piece. The feed is made manually with the cross slide hand wheel. The depth of cut is made with the top slide. See figure-28.

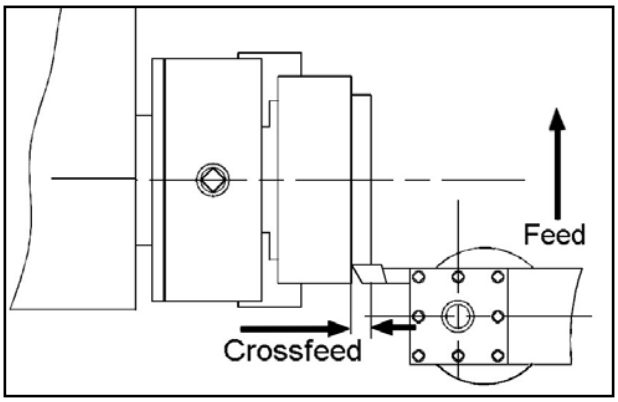


Figure-28 Facing & dressing

TURNING BETWEEN CENTERS

For turning between centers, it is necessary to remove the chuck from the spindle. Fit the MT3 center into the 5/3 reducing sleeve (provided) and fit the reducing sleeve into the spindle taper.

Mount the work-piece fitted with the driver dog between the centers. The driver is driven by a catch or face plate. See figure-29.

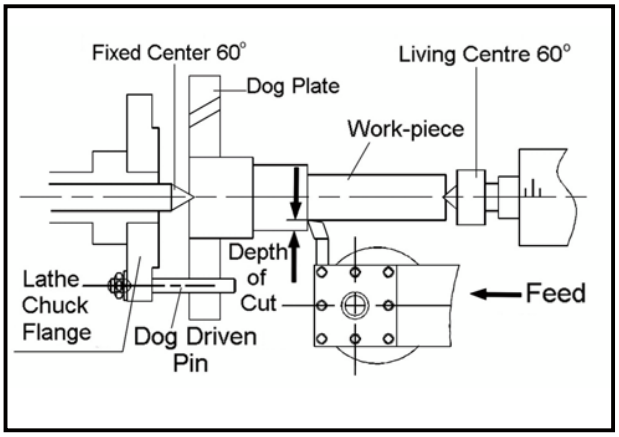


Figure-29 Turning between centers

IMPORTANT

Always use a small amount of grease on the tailstock center to prevent center tip from over heating.

THREAD CUTTING

Several different threads can be cut using the proper combination of gears and settings.

IMPERIAL THREAD: When cutting inch threads, the half nut and threading dial are used to thread in a conventional manner. The threading and feeding table on page-27 or on the headstock, specifies at which point a thread can be entered using the threading dial.

METRIC THREAD: The only difference in metric thread cutting is that the half nut must remain engaged during the entire threading process. The thread dial can not be utilized.

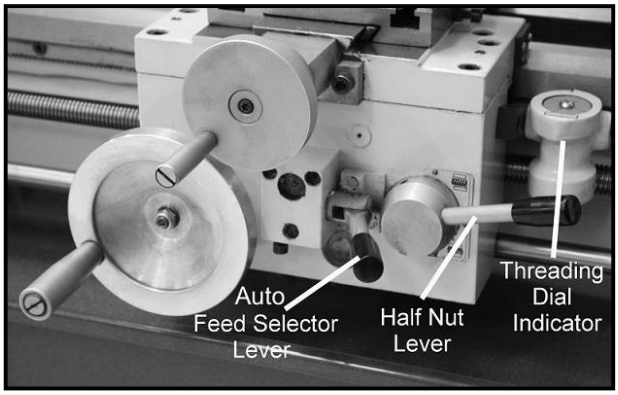


Figure-30 Half nut and threading dial

Set the machine up for the desired thread pitch.

Start the machine and engage the half nut. When the tool reaches the end of the cut, stop the machine by turning the motor off and at the same time back the tool out off the work-piece so that it clears the thread.

Do not disengage the half nut lever.

Reverse the motor direction allowing the cutting tool to traverse back to the starting point.

Repeat these steps until you have obtained results.

LEFT AND RIGHT THREAD CUTTING: The left and right thread cutting is done using the feed direction selector knob. Turning the feed direction selector knob counter-clockwise, cuts left thread while turning it clockwise, cuts right thread.

> ***IMPORTANT***
> *We suggest selecting the low speed. It provides stronger torque while operation.*

CHANGE GEARS REPLACEMENT

To replace the change gears:

Make sure the switch is in the OFF position and the cord is unplugged from the power outlet.

Unscrew the two fastening knobs and remove the protective cover to access the change gears.

Unscrew the bolt from the lead screw and the square nuts shown in figure-31 from the quadrant bolts in order to remove the change gears.

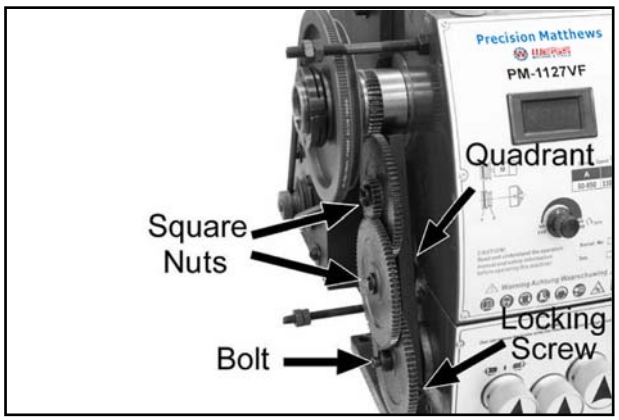


Figure-31 Change gears replacement

Select the proper gear set according to your requirements from the feed table given on the lathe (See page-27 Threading & Feeding Table for details) and install it onto the quadrant using nuts removed.

Re-install the protective cover.

GIBS ADJUSTMENT

There are two main gib screws adjustment for the machine; the cross slide gib screws and the top slide gib screws.

> ***WARNING***
> *Make sure the switch is in the OFF position and the cord is disconnected from the power source before making any adjustments. Failure to do so can result serious personal injury.*

CROSS SLIDE GIB SCREWS ADJUSTMENT

The adjustment gibs are located on the left side of the cross slide. To adjust gib, loosen the nuts holding the gibs. Tighten the gibs until excess movement is eliminated and retighten the nuts. See figure-32.

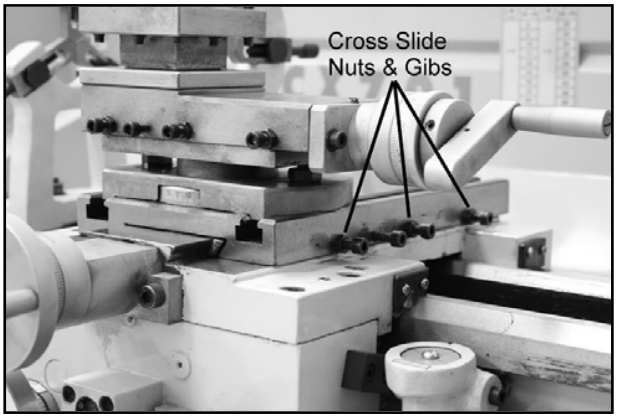


Figure-32 Cross slide adjustment gib screws

TOP SLIDE GIBS ADJUSTMENT

Locate the adjustment gibs on the side of the top slide as shown in figure-36. Loosen the nuts holding the gibs and then tighten the gibs until excess movement is eliminated. Once all the gibs are tightened properly, retighten the nuts.

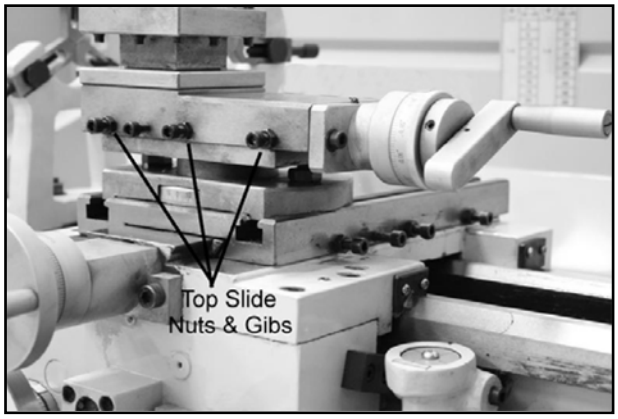


Figure-33 Top slide adjustment gibs screws

CHUCK RUN-OUT

If your lathe requires a higher level of accuracy, you may find it necessary to true-up the chuck to ensure minimal run-out.

To check and correct the chuck run-out:

Mount a piece of bar stock in the chuck. The stock should protrude approximately 50mm.

Use a dial indicator and measure the run-out at the end of the bar. In most cases, the amount of run-out will not exceed 0.12mm over 50mm which should be accurate enough for most applications. If the run-out on the chuck is excessive (e.g. greater than 0.15mm), the excess run-out should be eliminated.

Start by removing the chuck.

Remove the bolts, securing the back plate to the chuck. Tap along the edge of the mounting shoulder until the chuck and back plate are free of each other and thread back plate onto the spindle.

Remove about 0.12mm of material from the surface that the chuck mounts to. Be careful not to remove any material from the diameter of the shoulder. See figure-34.

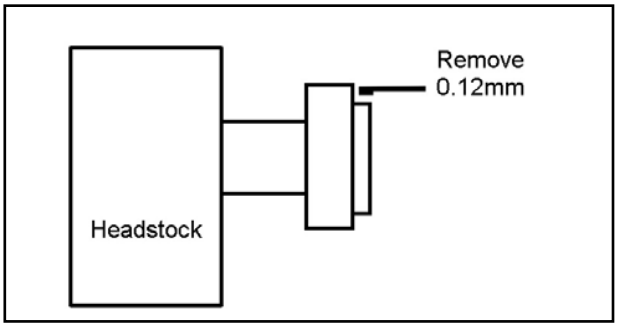


Figure-34 Turning the back plate

Install the chuck onto the back plate and check the run-out. If the run-out is not within an acceptable range, it may be necessary to turn a new shoulder on the back plate.

Before turning a new shoulder, measure the diameter of the recess in the back of the chuck accurately.

Remove approximately one half of the thickness of the shoulder (approximately 1.5mm). Remove the same thickness off the face of the mounting surface.

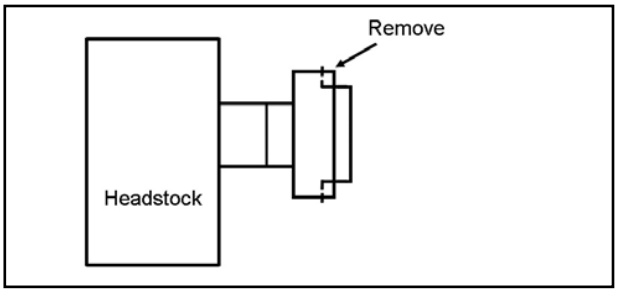


Figure-35 Turning new shoulder on back

The finished diameter of the shoulder should be 0.025mm larger than the diameter of the recess in the chuck. This is a critical step in minimizing chuck run-out.

Re-install the chuck and check for run-out.

HEADSTOCK & TAILSTOCK ALIGNMENT

The headstock and tailstock alignment has been adjusted properly in the factory before the machine is shipped to you. However, after lengthy operation, the headstock and tailstock may be out of alignment.

To check the centers alignment:

Center drill a 150mm piece of bar stock on one end and position it between the headstock and tailstock as shown in figure-36.

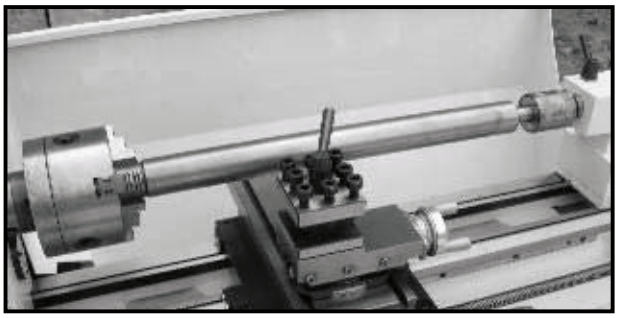


Figure-36 checking headstock and tailstock alignment

Turn approximately 0.025mm off diameter.

Measure the stock with a micrometer. If the stock is thicker at the tailstock end, the tailstock needs to be moved towards you to the amount of taper. See figure-37.

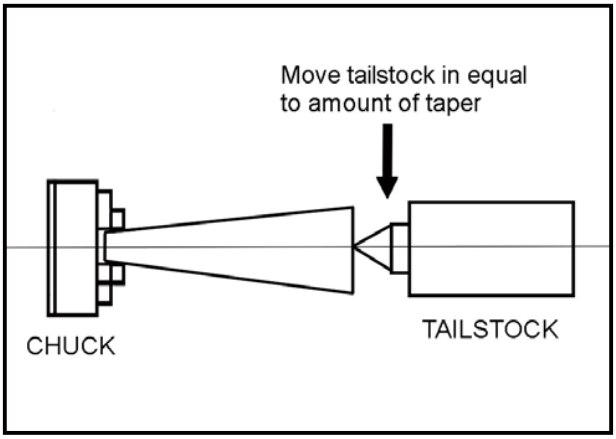


Figure-37 Stock thicker at the tailstock end

If the stock is thinner at the tailstock end, the tailstock needs to be moved away from you to the amount of taper. See figure-38.

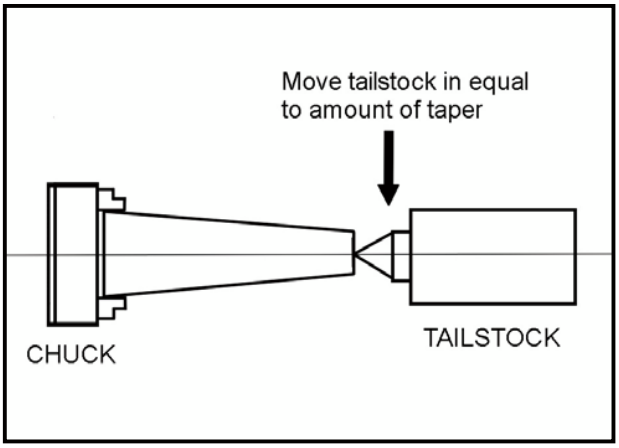


Figure-38 Stock thinner at the tailstock end

TO MOVE THE TAILSTOCK:

Make sure the switch is in the OFF position and the cord is disconnected from the power outlet.

Adjust the tailstock offset to the amount by turning the adjustment screw shown in figure-39.

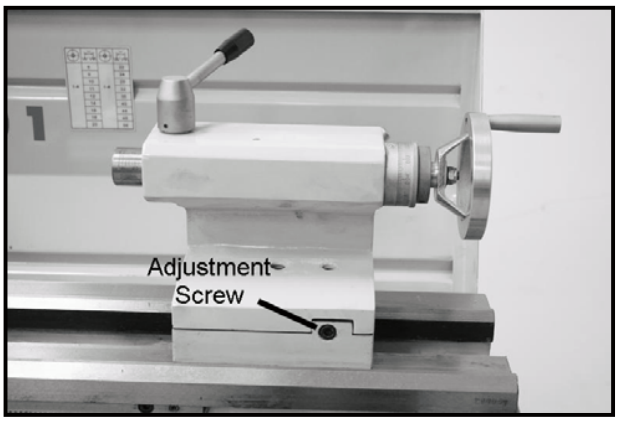


Figure-39 Tailstock offset adjustment screw

Turn another 0.5mm off the stock and check for taper. Repeat this procedure until the tailstock is aligned with the headstock.

MAIN SPINDLE BEARINGS

The main spindle bearings are adjusted at the factory. If end play becomes evident after considerable use, the bearings may be adjusted.

Loosen two hex socket cap screws in the slotted nut shown in figure-40. Tighten slotted nut until all end play is taken up. The spindle should still revolve freely.

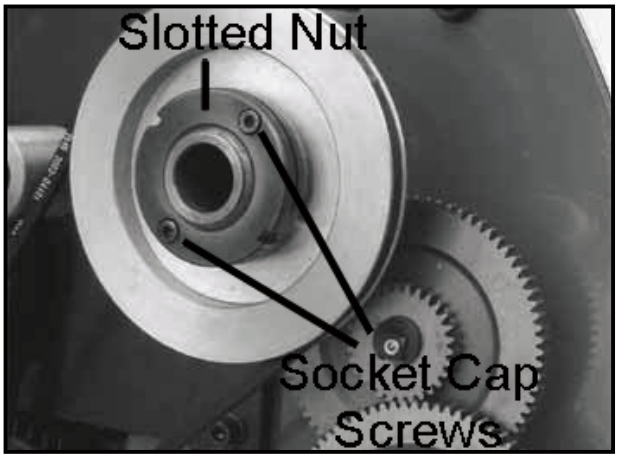


Figure-40 Main spindle bearing adjustment

Re-tighten the two hex socket cap screws.

CAUTION

Make sure not to tighten the hex socket cap screws excessively or it will damage the bearing.

LUBRICATION

Lubricate all slide-ways lightly before every use with 20W oil.

WARNING

Lathe must be serviced at all lubrication points and all reservoirs filled to operating level, before the lathe is placed into service. Failure to comply may cause serious damage.

GEARBOX

Oil must be up to the indicator mark in the oil sight glass as shown in figure-41. Top off with Mobilgear 627 or equivalent. Fill by pulling the plug shown in figure-41.

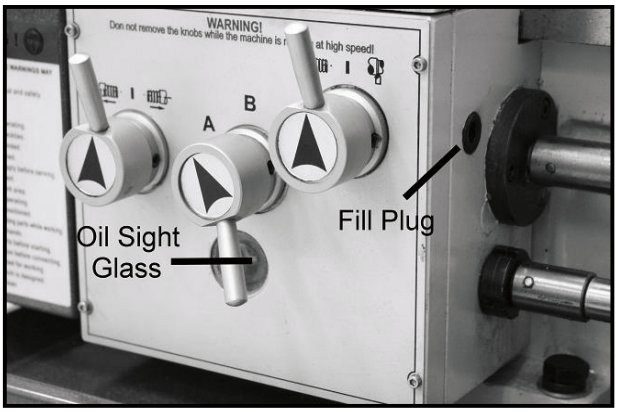


Figure-41 Gear box oil sight glass & fill plug

To drain the oil, remove the drain plug on the left side of headstock. See figure-45. Drain completely and refill after first three months of operation. Then, change oil in the headstock annually.

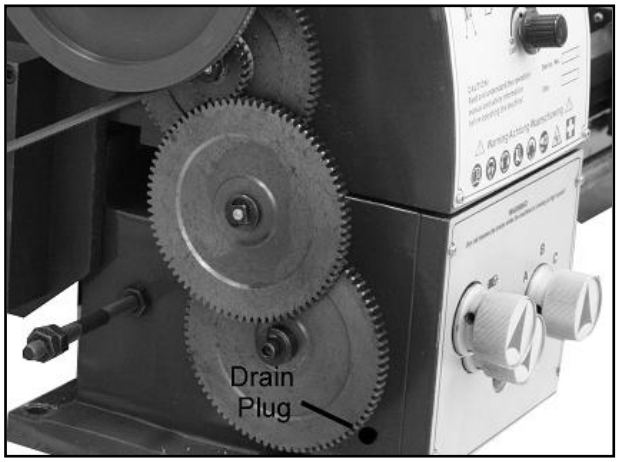


Figure-42 Gearbox oil drain plug

CHANGE GEARS

Apply a few drops of oil on the gears teeth and avoid getting oil on the pulleys and belt.

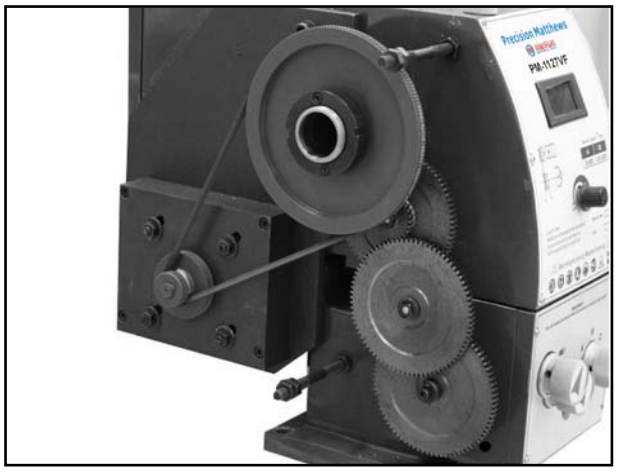


Figure-43 Change gears

SADDLE

Lubricate the four oil ports (**A)** shown in figure-47 with 20W machine oil once daily.

CROSS SLIDE

Lubricate two oil ports **(B)** shown in figure-44 with 20W machine oil.

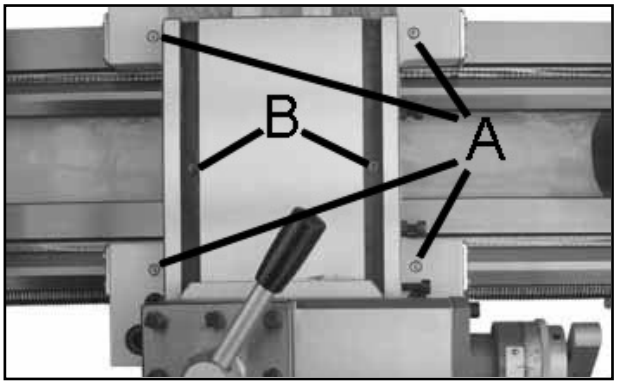


Figure-44 Carriage and cross slide oil fill ports

CROSS SLIDE HAND WHEEL

Lubricate the oil port **(C)** on the cross slide hand wheel shown in figure-45 with 20W machine.

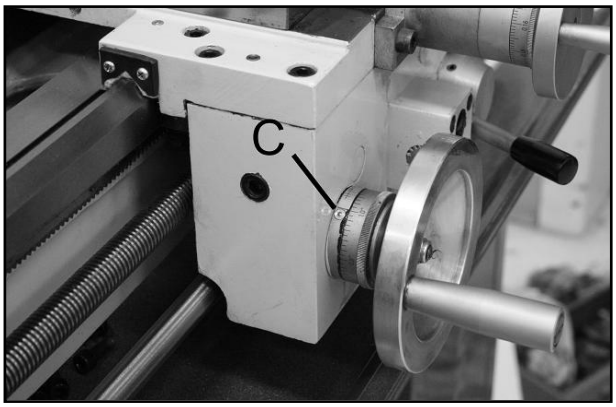


Figure-45 Cross slide hand wheel oil port

LEAD SCREW

Lubricate the oil ports (D & E) shown in figure-46 with 20W machine oil once daily.

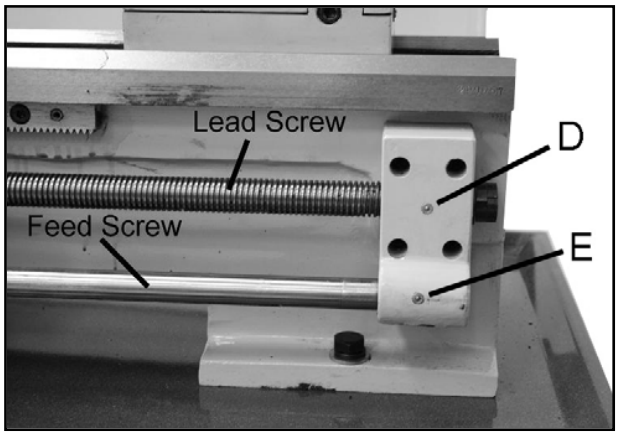


Figure-46 Lead screw and feed screw oil ports

TAILSTOCK

Lubricate the two oil ports shown in figure-47 once daily.

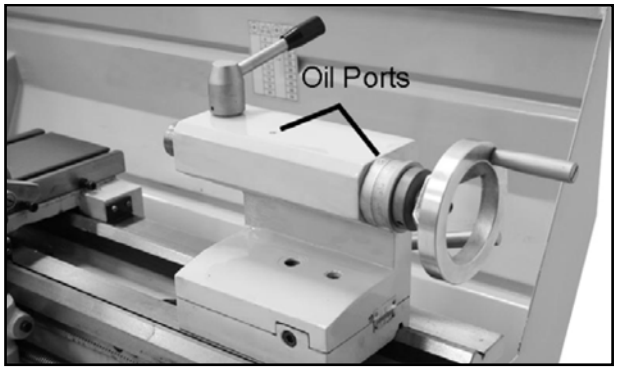


Figure-47 Tailstock oil ports

WARNING

Make sure the machine is turned off and the cord is disconnected from the power source before servicing and replacing any components on the machine.

MAINTENANCE

During the life of your machine, you will need to practice some regular maintenance to keep your lathe in peak performance condition.

1. Treat the machine with care, keep it clean and grease and lubricate it regularly. Only through good care you can be sure that the working quality of the machine will remain constant.

2. Oil, grease and cleaning agents are pollutants and must not be disposed off through the drains or in normal garbage. Dispose of those agents in accordance with current local environmental regulations. Cleaning rags impregnated with oil, grease and cleaning wool in a suitable closed vessel and disposed of in an environmentally sound way. Do not put them with normal garbage.

3. Lubricate all slide ways lightly before every use. The change gears and the lead screw must also be lightly lubricated with lithium based grease.

4. During operation, the chips which fall onto the sliding surface should be cleaned in a timely fashion. Frequent inspections should be made to prevent chips from falling into the position between the carriage and bed way.

5. After the operation every day, eliminate all the chips and clean different parts of the machine tool and apply machine tool oil to prevent from rusting.

6. Good housekeeping practice should be followed on a daily basis keeping your lathe clean and well lubricated.

OPTIONAL STAND

The Lathe features an optional stand which can be bought separately.

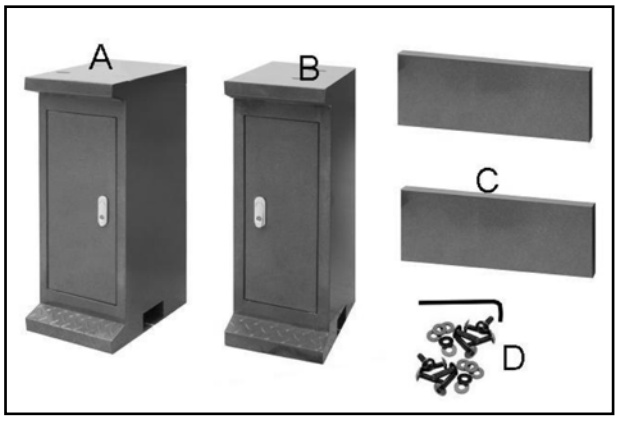


Figure-48 Stand inventory

LIST OF CONTENTS QTY

A. Left Cabinet..... 1
B. Right Cabinet 1
C. Connecting Brackets..... 2
D. Mounting Hardware..... 1 Bag

STAND ASSEMBLY

Before attaching the brackets to the stands, thread the bolts into the holes to break the paint ensuring smooth threading after.

Connect the left and right cabinet by attaching the brackets to the cabinets and securing those using screws and washers provided.

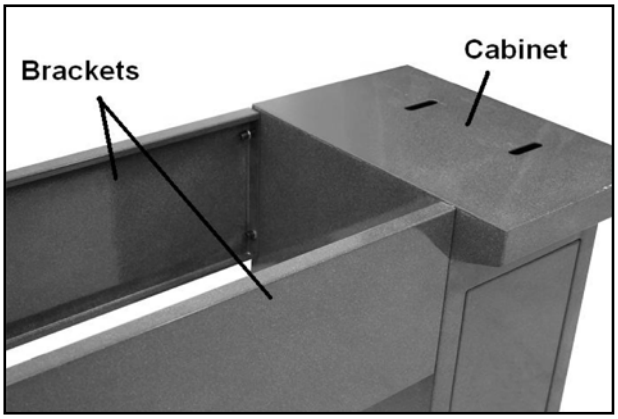


Figure-49 Mounting the lathe on the stand

Once both the brackets are properly secured to the cabinets, position the chip tray on the cabinets aligning the holes on the chip tray with the holes on the cabinet. Now, position the lathe on the stand using a fork truck. Align the holes on the machine with the holes on the chip tray and the cabinets.

Open the cabinets and insert the bolts and washers (provided with the stand) from the top and tighten the nuts, from inside cabinets.

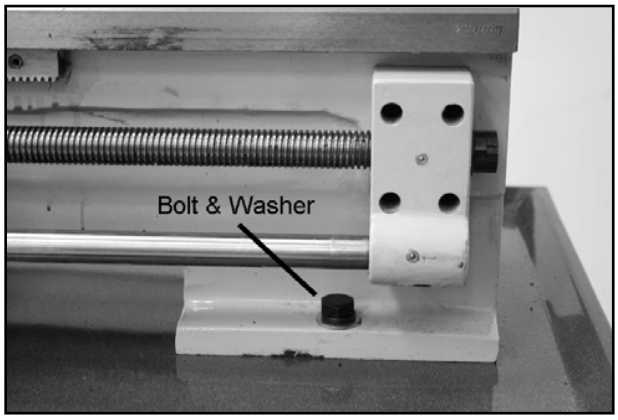


Figure-50 Lathe mounted on the stand

ELECTRICAL CONNECTIONS

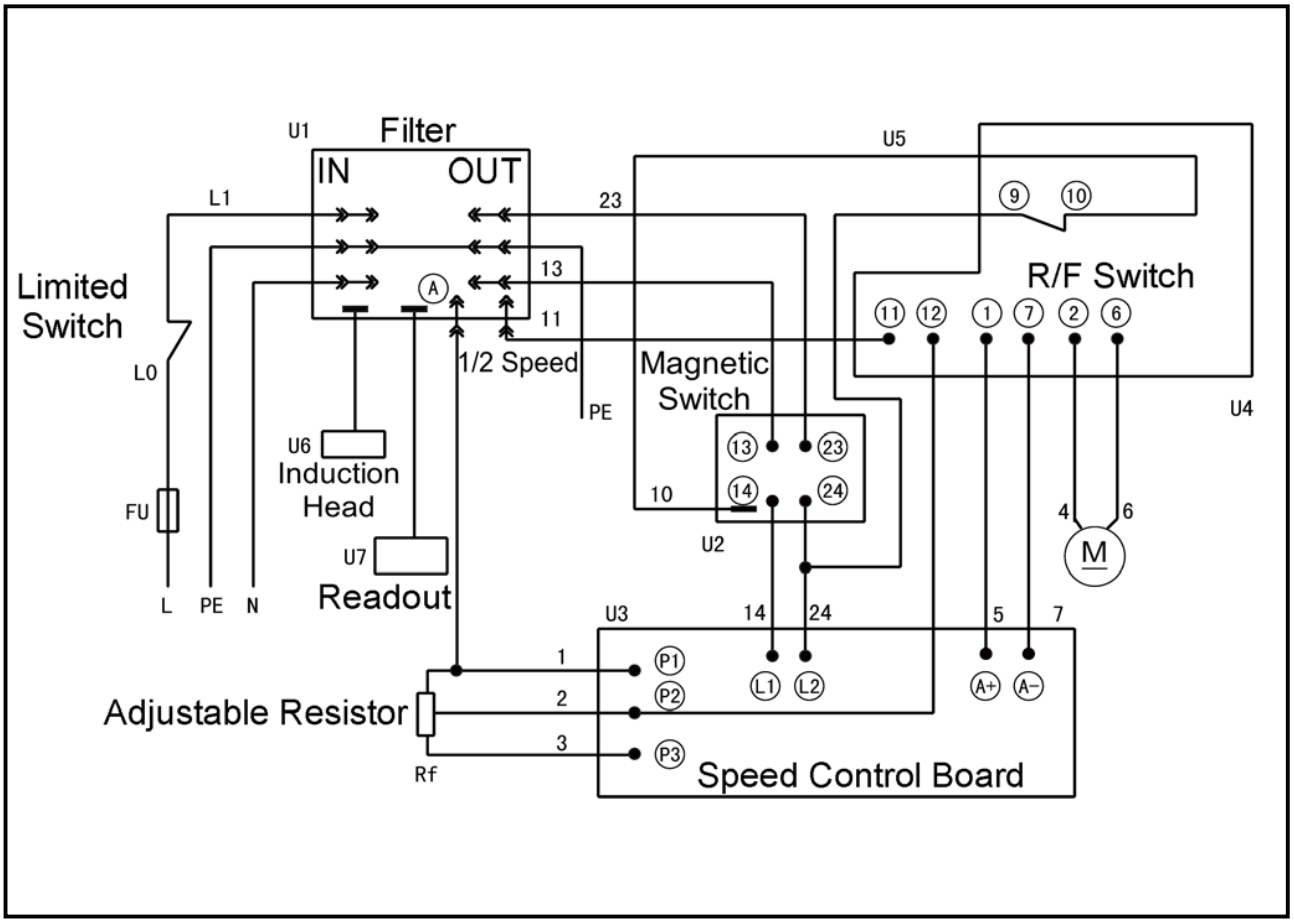
The Variable Speed Lathe is rated at 1.5-Horse Power, Single Phase, 110-Volt and 12.3 Amps. Use the wiring diagram for connecting the lathe to the main supply.

Make sure the lathe is properly grounded. See page-8 for details.

WARNING

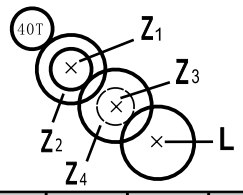
Connection of the lathe and all other electrical work may only be carried out by an authorized electrician. Failure to comply may cause serious injury and damage to the machinery and surroundings.

WIRING DIAGRAM FOR PM-1127VF-LB



THREADING & FEEDING TABLE FOR LATHE

METRIC



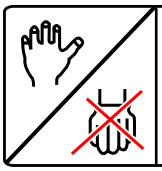
Z1 Z2 / Z4 Z3 / L		45 75 / 80 20 / H 85	45 75 / 80 30 / H 85	30 70 / 80 50 / H 85	30 75 / 80 50 / H 60	45 75 / 60 50 / H 80
	C	0.07	0.10	0.12	0.16	0.25
	A	0.14	0.21	0.25	0.32	0.5
	B	0.28	0.42	0.5	0.65	
	C					0.03
	A	0.017	0.026	0.03	0.036	0.06
	B	0.035	0.052	0.06	0.072	0.12

mm

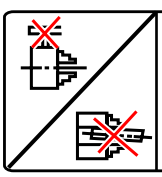
Z1 Z2 / Z4 Z3 / L	H 60 / 20 75 / 80 H	H 60 / 30 80 / 75 H	H 60 / 50 80 / 75 H	H 60 / 50 80 / 60 H	H 50 / 60 80 / 60 H	H 50 / 70 80 / 60 H
C	0.2	0.3	0.5	0.62	0.75	0.88
A	0.4	0.6	1.0	1.25	1.5	1.75
B	0.8	1.2	2.0	2.5	3.0	3.5

n / 1”

Z1 Z2 / Z4 Z3 / L	H 60 / 60 70 / 65 H	H 50 / 60 85 / 65 H	H 60 / 50 75 / 60 H	H 60 / 45 50 / 85 H	H 60 / 50 80 / 65 H	H 70 / 45 60 / 85 H	H 50 / 45 85 / 70 H
C	8	9	9.5	10	11	12	14
A	16	18	19	20	22	24	28
B	32	36	38	40	44	48	56

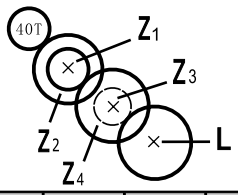


Keep hands out of moving parts of this machine. Do not wear gloves or loose clothes.



Be sure the key is removed from the chuck and workpiece is completely gripped before rotating the spindle!

INCH



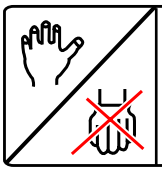
Z1 Z2 / Z4 Z3 / L		30 75 / 80 25 / H 80	40 75 / 70 20 / H 80	40 75 / 70 25 / H 80	40 75 / 80 30 / H 80	40 75 / 70 30 / H 80
in	C	0.0025	0.003	0.0038	0.004	0.0045
	A	0.005	0.006	0.0075	0.008	0.009
	B	0.01	0.012			
in	C					
	A	0.0015	0.0019	0.0024	0.0025	0.0028
	B	0.003	0.0039	0.0048	0.005	0.0056

mm

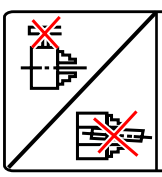
Z1 Z2 / Z4 Z3 / L	63 75 / 80 45 / H 60	H 60 / 50 63 / 80 H	45 50 / 80 63 / H 60
C	0.5		0.75
A	1.0	1.25	1.5
B	2.0	2.5	3.0

n / 1”

Z1 Z2 / Z4 Z3 / L	H 80 / 30 40 / 60 H	H 70 / 50 75 / 60 H	H 70 / 40 50 / 80 H	H 80 / 30 60 / 55 H	H 80 / 30 60 / 65 H	H 55 / 50 75 / 80 H	H 60 / 40 70 / 80 H
B	8	9	10	11	13	12	14
A	16	18	20	22	26	24	28
C	32	36	40	44	52	48	56



Keep hands out of moving parts of this machine. Do not wear gloves or loose clothes.

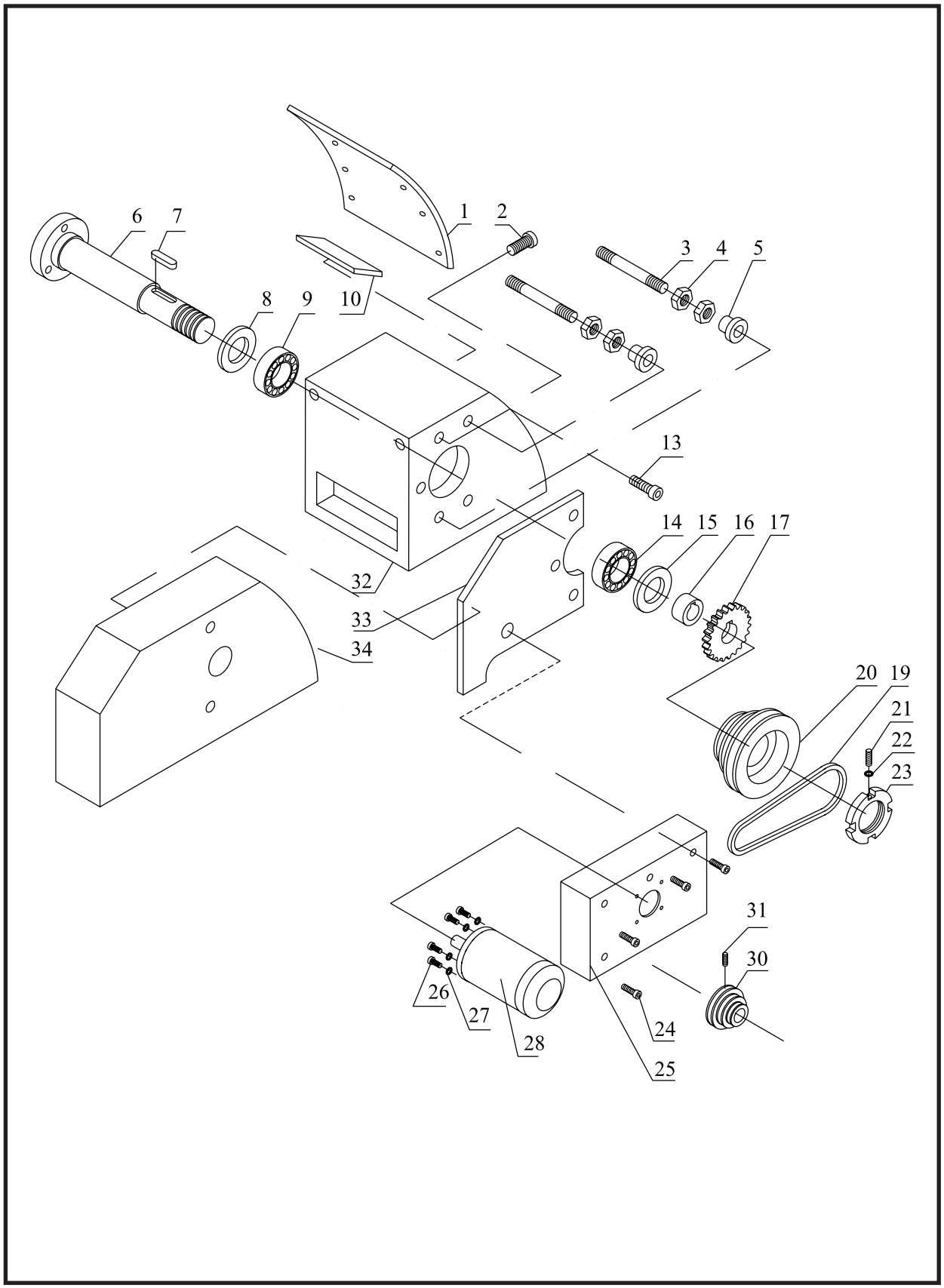


Be sure the key is removed from the chuck and workpiece is completely gripped before rotating the spindle!

PM-1127VF-LB TROUBLESHOOTING

Problem	Possible Reason	Elimination
Surface of workpiece is too rough	Tool blunt Tool springs Feed too high Radius at the tool tip too small	Resharpen tool Clamp tool with less overhang Reduce feed Increase radius
Workpiece becomes coned	Centers are not aligned (tailstock has offset) Top slide not aligned well (cutting with the top slide)	Adjust tailstock to the center Align top slide well
Lathe is chattering	Feed too high Slack in main bearing	Reduce feed Adjust the main bearing
Center runs hot	Workpiece has expanded	Loosen tailstock center
Tool has a short edge life	Cutting speed too high Crossfeed too high Insufficient cooling	Reduce cutting speed Lower crossfeed(finishing allowance should not exceed 0.5mm) More coolant
Flank wear too high	Clearance angle too small Tool tip not adjusted to center high	Increase clearance angle Correct height adjustment of the tool
Cutting edge breaks off	Wedge angle too small (heat build-up) Grinding crack due to wrong cooling Excessive slack in the spindle bearing Arrangement (vibrations)	Increase wedge angle Cool uniformly Adjust the slack in the spindle bearing arrangement
Cut thread is wrong	Tool is clamped incorrectly or has been started grinding the wrong way Wrong pitch Wrong diameter	Adjust too to the center Grind angle correctly Adjust the right pitch Turn the workpiece to the correct diameter
Spindle does not activate	Emergency stop switch activated	Unlock emergency stop switch

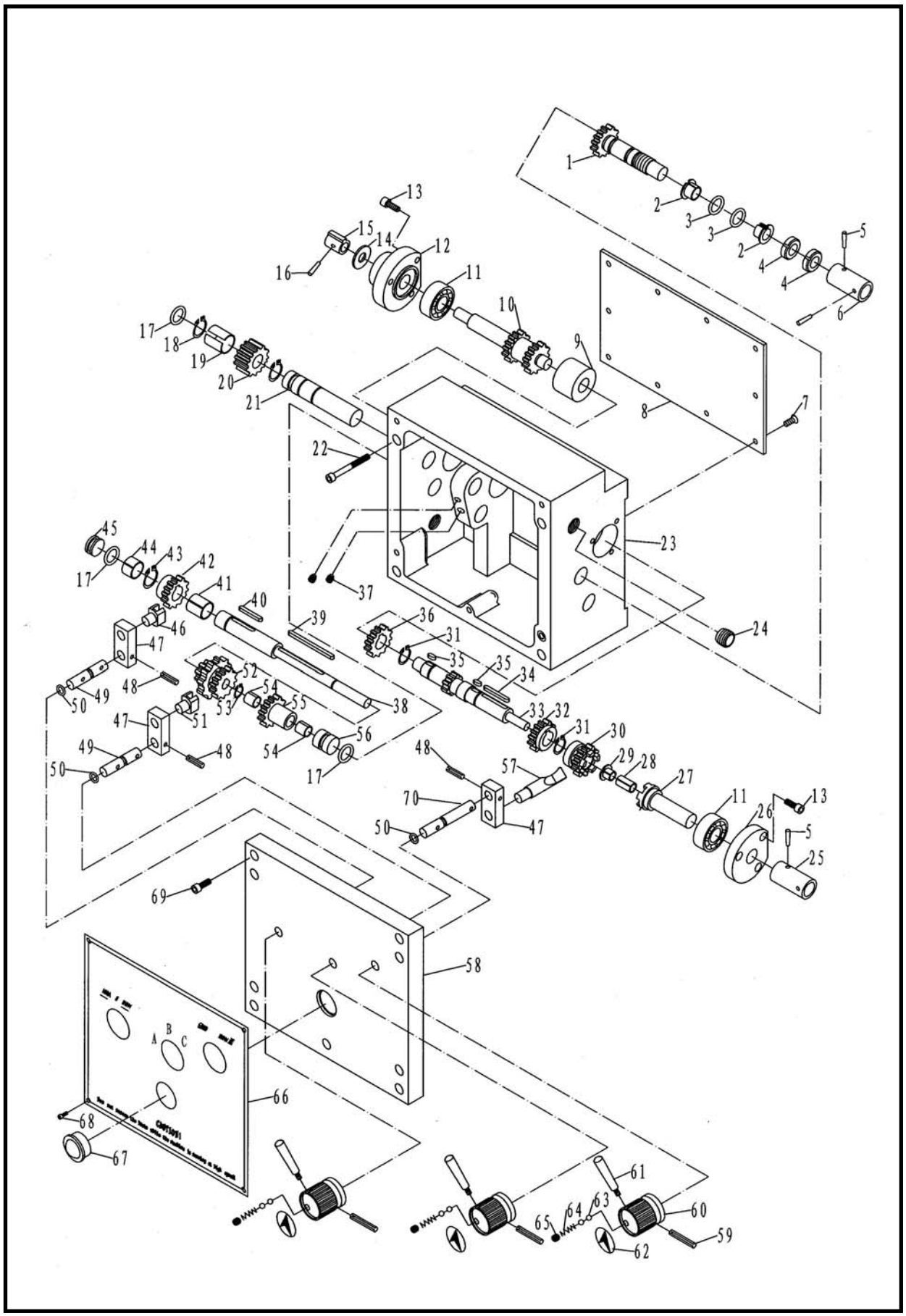
PM-1127VF-LB Lathe – Headstock and Driving Assembly



PM-1127VF-LB Lathe – Headstock and Driving Assembly

No.	Parts No.	Description	Specification	Qty
1	1	Label		1
2	2	Screw	Φ4x10	6
3	3	Bolt		2
4	4	Nut	M10	4
5	5	Nut	M10	2
6	6	Spindle		1
7	7	Key	8x45	1
8	8	Gasket		1
9	9	Bearing		1
10	10	Headstock		1
13	13	Screw	M8x25	2
14	14	Bearing	2007109E	1
15	15	Gasket		1
16	16	Bush		1
17	17	Gear		1
18	19	Belt	Gates 730	1
19	20	Spindle Pulley		2
20	21	Set Screw	M5x12	1
21	22	Washer		2
22	23	Nut		1
23	24	Screw		4
24	25	Bracket		1
25	26	Screw		4
26	27	Washer		4
27	28	DC Motor	1.0KW	1
28	30	Motor Pulley		1
29	31	Set Screw		1
30	32	Head Stock		1
31	33	Belt Cover		1
32	34	Bracket Plate		1

PM-1127VF-LB Lathe - Gearbox Assembly



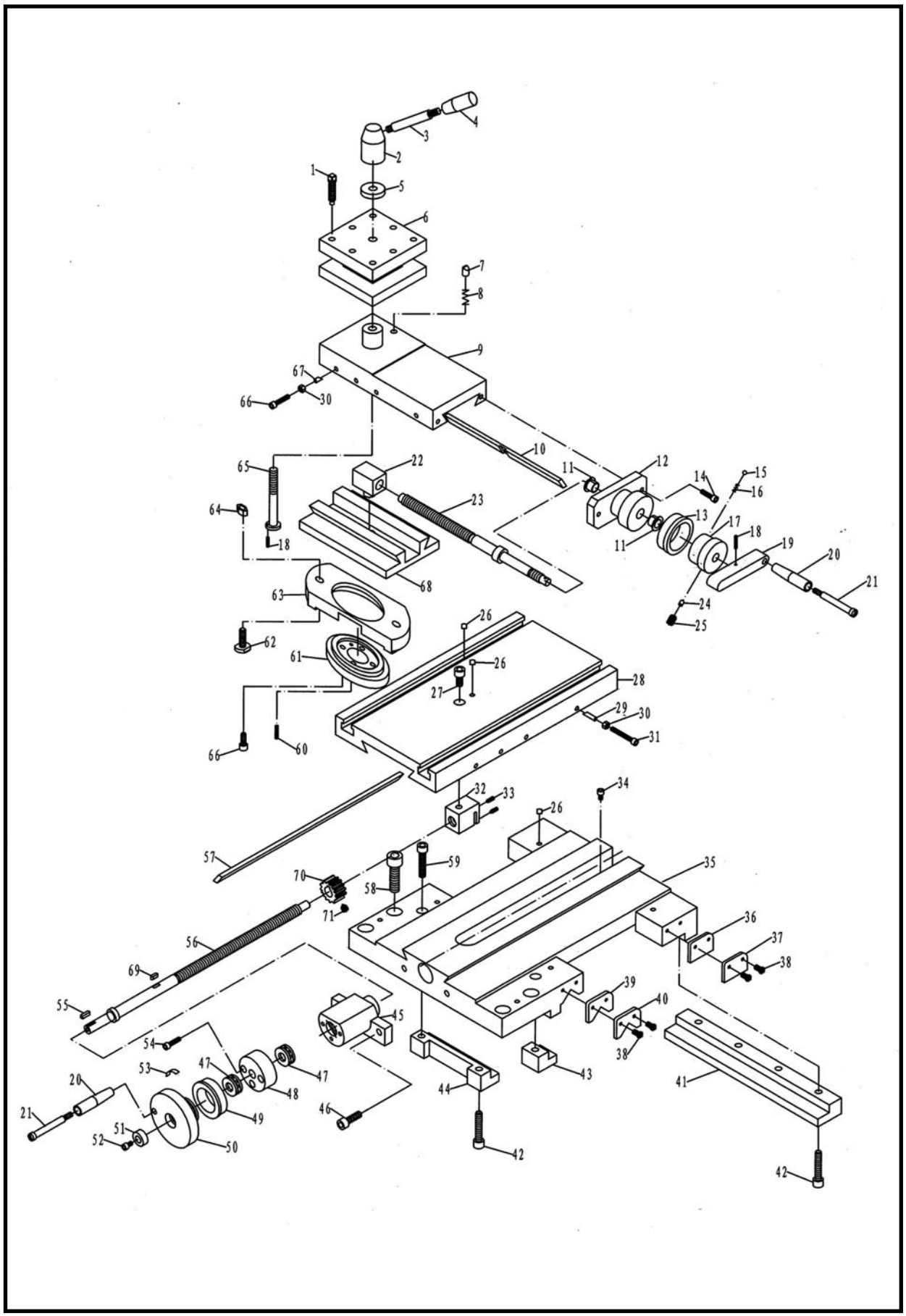
PM-1127VF-LB Lathe - Gearbox Assembly (I)

No	Parts No.	Description	Specification	Qty
42	1	Shaft		1
43	2	Bearing	16170	2
44	3	O-Ring	18001400	2
45	4	Nut	M16x1.5	2
46	5	Pin	Φ3x22	2
47	6	Collar		1
48	7	Screw	M5x8	10
49	8	Cover		1
50	9	Collar		1
51	10	Gear		1
52	11	Bearing	6202	2
53	12	Left Plug		1
54	13	Hex Socket Cap Screw		6
55	14	Washer	Φ10	1
56	15	Key		1
57	16	Pin	Φ4x14	1
58	17	O-Ring	18001500	3
59	18	Snap Ring	Φ18	2
60	19	Bearing	1815	1
61	20	Gear		1
62	21	Shaft		1
63	22	Hex Socket Cap Screw	M6x50	4
64	23	Gearbox		1
65	24	Set Screw	M16x1.5x12	2
66	25	Collar		1
67	26	Right Plug		1
68	27	Shaft		1
69	28	Bearing	0815	1
70	29	Bearing	08075	1
71	30	Gear		1
72	31	Snap Ring	Φ15	2
73	32	Gear		1
74	33	Shaft		1
75	34	Key	4x25	1
76	35	Key	4x8	2
77	36	Gear		1
78	37	Set Screw		2
79	38	Shaft	Φ6x18	1
80	39	Key	4x50	1
81	40	Key	4x20	1
82	41	Bearing	1615	1
83	42	Gear		1
84	43	Snap Ring	Φ16	1
85	44	Bearing	1610	1

PM-1127VF-LB Lathe - Gearbox Assembly (II)

No	Parts No.	Description	Specification	Qty
86	45	Left Plug		1
87	46	Fork		1
88	47	Bracket		3
89	48	Pin	Φ3X20	3
90	49	Shaft		2
91	50	O-Ring	1800690	3
92	51	Fork		1
93	52	Gear		1
94	53	Snap Ring	Φ10	1
95	54	Bearing	1010	2
96	55	Gear		1
97	56	Right Plug		1
98	57	Dials Block		1
99	58	Gearbox Cover		1
100	59	Pin	Φ5x40	3
101	60	Knob Base		3
102	61	Knob		3
103	62	Label		3
104	63	Ball	Φ5	6
105	64	Spring	0.8x4x16	3
10	65	Screw	M6x12	3
107	66	Label		1
108	67	Oil Sight		1
109	68	Screw	M3x16	4
110	69	Screw	M5x16	5
111	70	Shaft		1

PM-1127VF-LB Lathe - Top slide Cross slide , Carriage Assembly



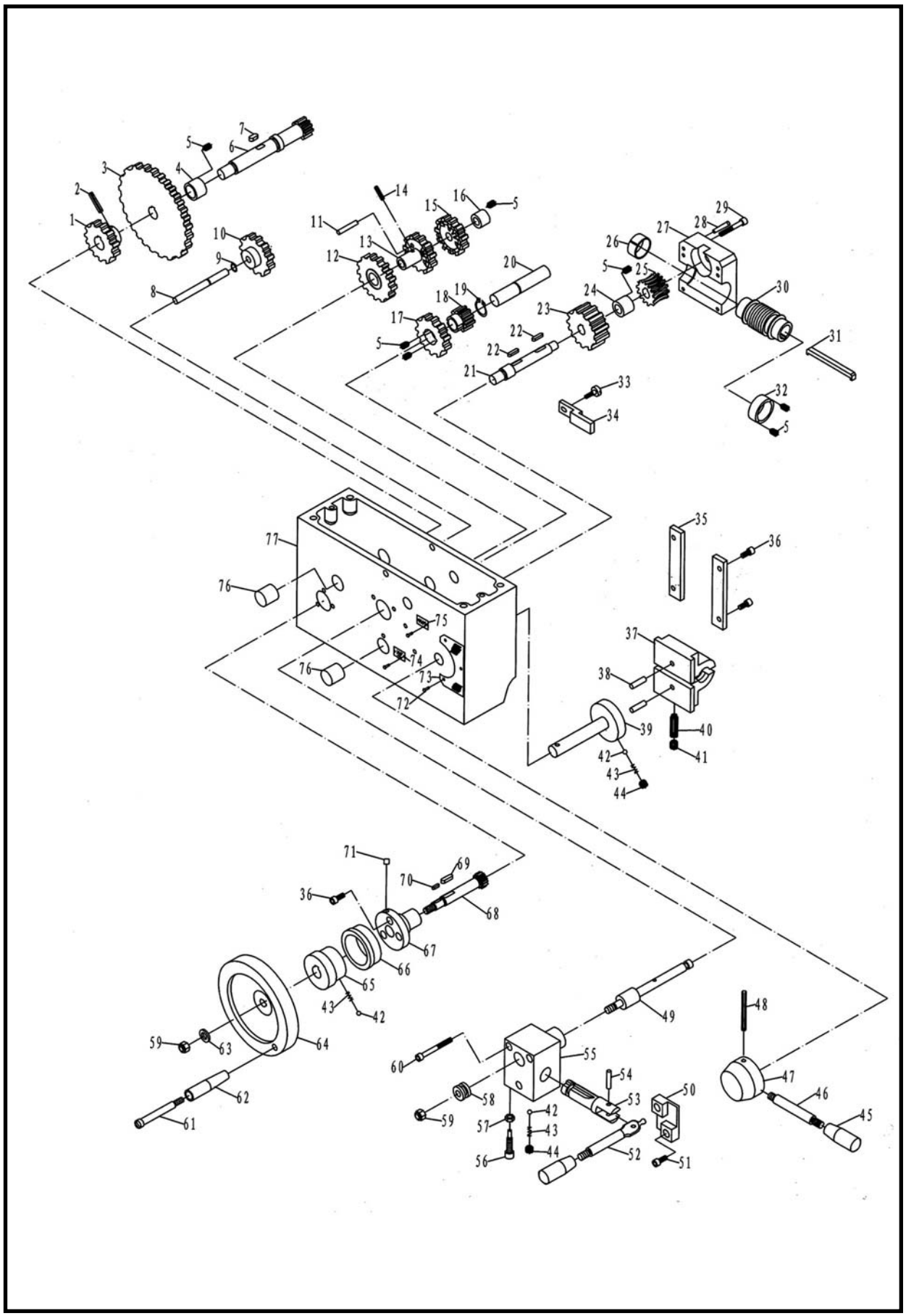
PM-1127VF-LB Lathe - Top slide Cross slide , Carriage Assembly (I)

No	Parts No.	Description	Specification	Qty
112	1	Screw	M8x30	8
113	2	Handle Base		1
114	3	Handle Shaft		1
115	4	Knob		1
116	5	Washer		1
117	6	Post Base		1
118	7	Stop		1
119	8	Spring	7x0.8x11	1
120	9	Top Slide		1
121	10	Gib		1
122	11	Washer		2
123	12	Hub		1
124	13	Index Ring		1
125	14	Hex Socket Cap Screw	M6x20	2
126	15	Ball	Φ5	1
127	16	Spring	1.5x0.5x6.5	1
128	17	Index Base		1
129	18	Pin	Φ3x16	2
130	19	Lever		1
131	20	Lever		2
132	21	Lever Shaft		2
133	22	Block		1
134	23	Screw		1
135	24	plug		3
136	25	Set Screw	M6x10	3
137	26	Oil Ball		7
138	27	Hex Socket Cap Screw	M8x10	1
139	28	Cross Slide		1
140	29	plug		4
141	30	Hex Nut	M6	8
142	31	Hex Socket Cap Screw	M6x30	4
143	32	Block		1
144	33	Set Screw	M4x8	2
145	34	Hex Socket Cap Screw	M5x6	1
146	35	Saddle		1
147	36	Wiper		2
148	37	Plate		2
149	38	Screw	M4x18	8
150	39	Wiper		2
151	40	Plate		2
152	41	Strip		1
153	42	Hex Socket Cap Screw	M8x30	5
154	43	Strip		1
155	44	Strip		1

PM-1127VF-LB Lathe - Top slide Cross slide , Carriage Assembly (II)

No	Parts No.	Description	Specification	Qty
156	45	Bracket		1
157	46	Hex Socket Cap Screw	M5x20	3
158	47	Bearing	51101	1
159	48	Collar		1
160	49	Index Ring		1
161	50	Handlewhere		1
162	51	Washer		1
163	52	Hex Socket Cap Screw	M5x10	1
164	53	Spring		1
165	54	Hex Socket Cap Screw	M5x20	3
166	55	Key		1
167	56	leadscrew		1
168	57	Gib		1
169	58	Hex Socket Cap Screw	M12x30	2
170	59	Hex Socket Cap Screw	M8x40	2
171	60	Pin	Φ4x20	1
172	61	Graduated Collar		1
173	62	T-Bolt	M10x30	2
174	63	Clamping Ring		1
175	64	Nut	M10	2
176	65	Bolt		1
177	66	Hex Socket Cap Screw	M6x16	8
178	67	plug		4
179	68	Swivel Base		1
180	69	Key	4x10	1
181	70	Gear		1
182	71	Set Screw	M5x16	1

PM-1127VF-LB Lathe - Apron Assembly



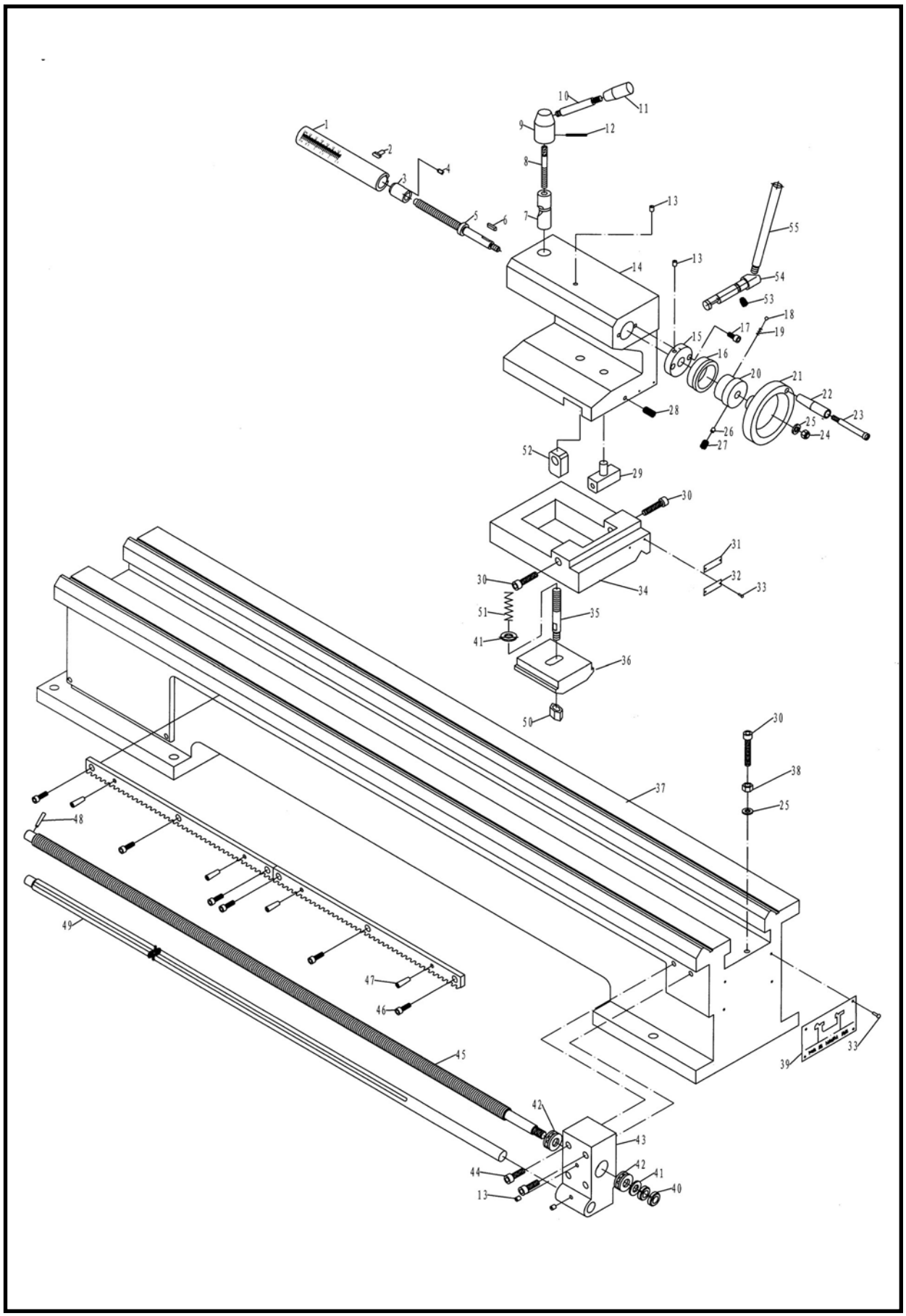
PM-1127VF-LB Lathe - Apron Assembly (I)

No	Parts No.	Description	Specification	Qty
183	1	Gear		1
184	2	Pin	Φ5x24	1
185	3	Gear		1
186	4	Washer		1
187	5	Set Screw	M4x8	7
188	6	Gear Shaft		1
189	7	Key		1
190	8	Shaft		1
191	9	Snap Ring	Φ8	1
192	10	Gear		1
193	11	Shaft		3
194	12	Gear		1
195	13	Gear		1
196	14	Pin	Φ4x16	1
197	15	Gear		1
198	16	Washer		1
199	17	Gear		1
200	18	Gear		1
201	19	Snap Ring	Φ15	1
202	20	Shaft		1
203	21	Worm		1
204	22	Key	5x14	2
205	23	Gear		1
206	24	Washer		1
207	25	Worm		1
208	26	Bearing	2501	1
209	27	Worm Base		1
210	28	Pin	Φ4x20	2
211	29	Hex Socket Cap Screw	M4x30	4
212	30	Worm		1
213	31	Key		1
214	32	Washer		1
215	33	Set Screw		1
216	34	Plate		1
217	35	Plate		2
218	36	Hex Socket Cap Screw	M5x12	7
219	37	Half Nut		1
220	38	Pin	Φ6x18	2
221	39	Cam Shaft		1
222	40	Hex Socket Cap Screw	M6x20	1
223	41	Hex Socket Cap Screw	M6x8	1
224	42	Ball	Φ5	3
225	43	Spring	0.7x4x10	3
226	44	Set Screw	M6x6	2

PM-1127VF-LB Lathe - Apron Assembly (II)

No	Parts No.	Description	Specification	Qty
227	45	Knob		2
228	46	Handle		1
229	47	Handle Base		1
230	48	Pin	Φ5x45	1
231	49	Shaft		1
232	50	Base		1
233	51	Hex Socket Cap Screw	M5x10	6
234	52	Shaft Handle		1
235	53	Shaft Forx		1
236	54	Pin	Φ5x20	1
237	55	Base		1
238	56	Set Screw		1
239	57	Nut	M6	1
240	58	Shift Lever		1
241	59	Nut	M8	2
242	60	Hex Socket Cap Screw	M5x35	2
243	61	Shaft Handle		1
244	62	Knob		1
245	63	washer	Φ8	1
246	64	Handwheel		1
247	65	Shaft		1
248	66	Graduated Collar		1
249	67	Bracket		1
250	68	Shaft		1
251	69	Key	5x14	1
252	70	Key	3x10	1
253	71	Oil Ball	Φ6	1
254	72	Rivet	Φ2x6	7
255	73	Plate		1
256	74	Plate		1
257	75	Plate		1
258	76	Collar		2
259	77	Apron		1

PM-1127VF-LB Lathe - Tailstock, Bed Assembly



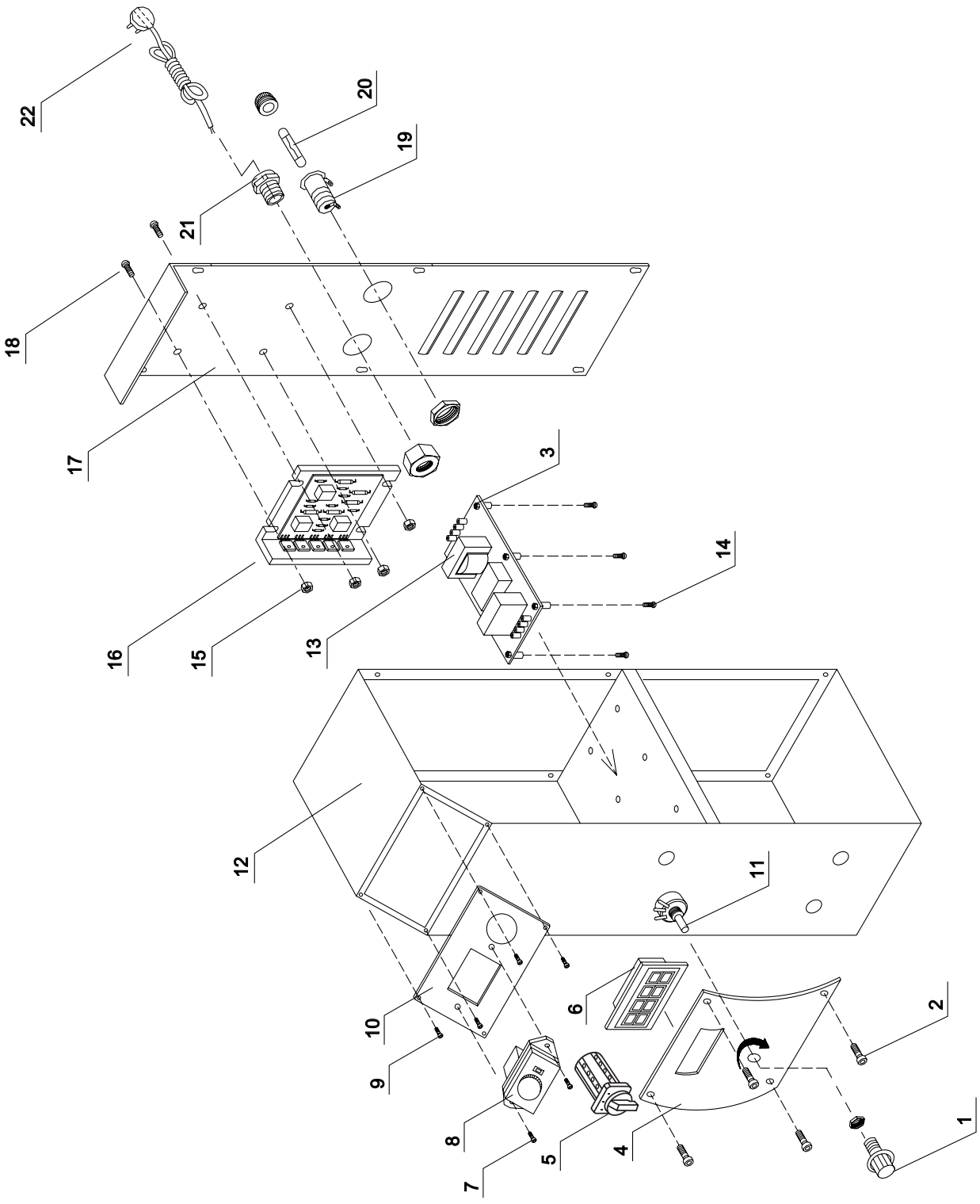
PM-1127VF-LB Lathe - Tailstock, Bed Assembly (I)

No	Parts No.	Description	Specification	Qty
260	1	Quill		1
261	2	Key		1
262	3	Nut		1
263	4	Set Screw	M6x10	1
264	5	Screw		1
265	6	Key	4x10	1
266	7	Pivot Block		1
267	8	Screw		1
268	9	Handle Base		1
269	10	Handle Shaft		1
270	11	Knob	M8	1
271	12	Pin	Φ3x30	1
272	13	Oil Ball	Φ6	4
273	14	Tailstock body		1
274	15	Flange Cover		1
275	16	Index Ring		1
276	17	Hex Socket Cap Screw	M6x10	2
277	18	Ball	Φ4	1
278	19	Spring	Φ4x1x6	1
279	20	Sleeve		1
280	21	Handwheel		1
281	22	Knob		1
282	23	Screw		1
283	24	Nut	M8	1
284	25	Washer	Φ8	6
285	26	Brake Block		1
286	27	Hex Socket Cap Screw	M6x10	1
287	28	Hex Socket Cap Screw	M6x16	1
288	29	Set Screw		1
289	30	Hex Socket Cap Screw	M8x40	3
290	31	Plate		1
291	32	Plate		1
292	33	Rivet	Φ2x6	8
293	34	Base		1
294	35	Bolt		1
295	36	Clamping Plate		1
296	37	Bed		1
297	38	Nut	M8	5
298	39	Plate		1
299	40	Nut	M12x1.25	2
300	41	Washer	Φ12	2
301	42	Bearing	51102	2
302	43	Bracket		1
303	44	Hex Socket Cap Screw	M8x20	2

PM-1127VF-LB Lathe - Tailstock, Bed Assembly (II)

No	Parts No.	Description	Specification	Qty
304	45	Feed Shaft		1
305	46	Hex Socket Cap Screw	M6x15	6
306	47	Pin	Φ6x20	4
307	48	Pin	Φ4x22	1
308	49	Shaft		1
309	50	Nut	M12	1
310	51	Spring	Φ13x1x62	1
311	52	Brake Block		1
312	53	Set Screw	M6x10	1
313	54	Shaft		1
314	55	Handle		1

PM-1127VF-LB Lathe - ELECTRICAL BOX ASSEMBLY



PM-1127VF-LB Lathe - ELECTRICAL BOX ASSEMBLY

No	Parts No.	Description	Specification	Qty
315	1	Timing Knob		1
316	2	Screw		4
317	3	Nut		4
318	4	Lable		1
319	5	R/F Swich		1
320	6	Speed Display	Optional	1
321	7	Screw		2
322	8	Magnetic Swich		1
323	9	Screw		4
324	10	Electrical Plate		1
325	11	Potentiometer		1
326	12	Electrical Box		1
327	13	Filter		1
328	14	Screw		6
329	15	Nut		4
330	16	Speed Control Board		1
331	17	Cover		1
332	18	Screw		4
333	19	Fuse Holder		1
334	20	Fuse (10A)		1
335	21	Strand Relief		1
336	22	Plug		1

PM-1127VF-LB

I. Visual Inspection	OK	IV. Electrical Inspection	OK
1. Correct label	☐	1. Connection tightened	☐
2. Painting damage	☐	2. Correct electrical elements	☐
3. Corrosion damage	☐	3. Earth resistance	☐
4. Screw tightened	☐	4. Insulation resistance	☐
II. Mechanical Inspection	**OK**	5. Tolerance voltage test	☐
1. Function of top slide	☐	6. Function of F/R switch	☐
2. Function of cross slide	☐	7. Emergency stop switch	☐
3. Function of carriage	☐	8. Speed control knob	☐
4. Function of tailstock	☐	9. Electrical control board	☐
5. Lubrication for sliding parts	☐	10. Function of speed readout	☐
6. Parallelism of pulleys	☐	11. Spindle safety cover	☐
7. Spindle adjustment	☐	12. Function of motor	☐
III. Active Inspection	**OK**	**V. Final Inspection**	**OK**
1. Function of gearbox	☐	1. Correct accessories	☐
2. Function of apron	☐	2. Correct documents	☐
3. Running test	☐	3. Machine cleanness	☐
4. Noise test	☐	4. Credibility antirust	☐
5. Leaky test	☐	5.Correct mark	☐
6. Cutting test	☐		
Remark:			

Precision Matthews

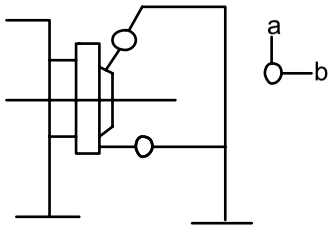
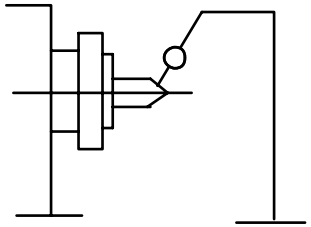
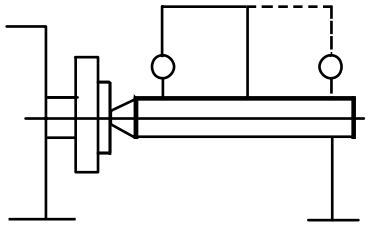
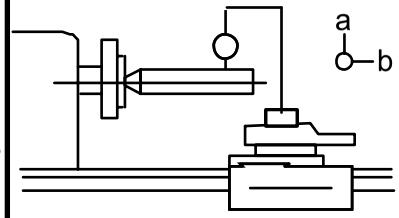
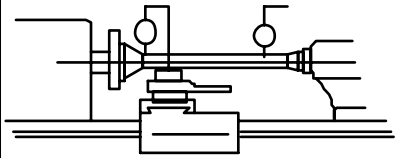
WEISS MACHINE & TOOLS

Test Record

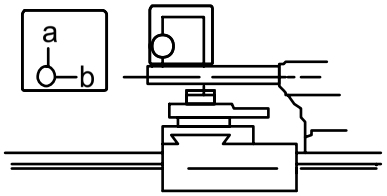
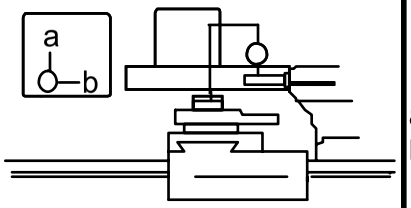
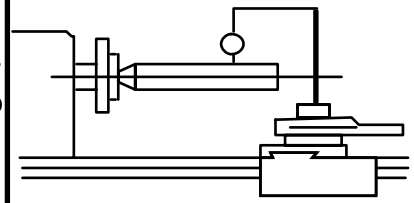
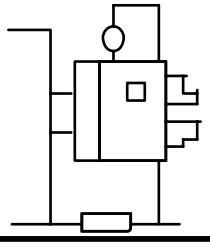
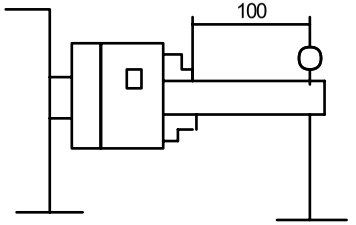
PM-1127VF-LB

Serial No.	
Date	
Inspector	

PM-1127VF-LB

NO.	INSPECTION ITEM	DIAGRAM	TOLERANCE(mm)	
			PERMISSIBLE	ACTUAL
1	Runout of spindle nose a radial plane b face plane		a 0.01 b 0.015	
2	Runout of center		0.03	
3	Runout of spindle taper hole a spindle nose b 250 distance		a 0.015 b 0.03	
4	Parallelism of center line of spindle to carriage movement a in horizontal plane b in vertical plane		a 0.03/250 b 0.03/250	a b
5	Difference between two centers (higher at tailstock)		0.02-0.06	

PM-1127VF-LB

NO.	INSPECTION ITEM	DIAGRAM	TOLERANCE(mm)	
			PERMISSIBLE	ACTUAL
6	Parallelism of tailstock quill to carriage movement a in horizontal plane b in vertical plane		a 0.025/50 b 0.025/50	a b
7	Parallelism of tailstock quill taper hole to carriage movement a in horizontal plane b in vertical plane		a 0.03/250 b 0.02/250	a b
8	Parallelism of center line of spindle to top slide movement		0.04/50	
9	Radial runout of chuck		0.04	
10	Radial runout of ø20 test bar		0.08/100	

Precision Matthews

WEISS MACHINE & TOOLS

MODEL NO.: _____ **MFG.:** _____

SERIAL NO.: _____ **N.W.:** _____ **KGS**

ITEM NO.: _____ **G.W.:** _____ **KGS**

DIMENSION: _____ **MM**

MANUFACTURED IN CHINA
TO WEISS SPECIFICATIONS

Precision Matthews

WEISS MACHINE & TOOLS

MODEL NO.: _____ **MFG.:** _____

SERIAL NO.: _____ **N.W.:** _____ **KGS**

ITEM NO.: _____ **G.W.:** _____ **KGS**

DIMENSION: _____ **MM**

MANUFACTURED IN CHINA
TO WEISS SPECIFICATIONS